MUSEUMS
EVOLUTION

SUPERVISOR: PROF. WAGIH FAWZI YOUSSEF

Museums Evolution
A History of Museums

4th Year Architecture, 2013
Faculty of Engineering Shoubra
Benha University

Cover: National Gallery in London vs Guggenheim museum in Bilbao, adopted from:
http://www.stephenwiltshire.co.uk/art_gallery.aspx?Id=4057
&
http://thompsonyoung.com/projects/sketches/city/

MUSEUMS

EVOLUTION

AHISTORY OF MUSEUMS

Research Team:

19th Century Museums & before

AbdelWahab Ahmed AbdelWahab
Husien Riad Ahmed Azab
Khaled Lotfy Ibrahem
Mohamed Adel Hassan
Mohamed AbdelHameed ElKady
Mahmoud Mohamed Magdy Mahmoud Hegazy
Osama Ashraf Ahmed

20th Century Museums & Byeond

Afnan Subhi AbdelRahman Mohamed
Asmaa Mohmed Mohmed Elbakry
Aya Fathy Yahia
Aya Magdy Bahaa Elden Mohamed
Eman AbdelRahman Mohamed
Esraa AbdElAleem Hassan
Esraa Fergany Abass
Shaimaa Ahmed Baiomy

Supervisor: Prof. Wagih Fawzi Youssef

Table of Contents

Background 5
A History Of Museums 6
Cabinet of curiosities 7
19th Century Museums & before 10
- the Louvre, Paris 10
- Dulwich Art Gallery, London 15
- Peale Museum, Baltimore 18
- the British Museum, London 20
- National Gallery, London 24
- Fitzwilliam Museum, Cambridge 29
- thorvaldsens museum, Copenhagen, Denmark 34
- Ashmolean Museum, Oxford 37
- Wadsworth Atheneum, Connecticut, USA 43
- National Gallery of Scotland, Edinburgh 47
- Victoria and Albert Museum, London 51
- University Museum, Oxford 56
- American Museum of Natural History, New York 60
- State Historical Museum, Moscow, Russia 61
- The Egyptian Museum, Cairo 62
- Museum of Islamic Art, Cairo 67

20th Century Museums & Byeond 71
- Solomon R. Guggenheim Museum, New York, USA 73
- Kimbell Art Museum, Texas, USA 85
- San Francisco Museum of Modern Art, California, USA 93
- Guggenheim Museum, Bilbao, Spain 104
- MAXXI Museum, Rome, Italy 112
- Royal Ontario Museum, Ontario, Canada 120
- Sogn & Fjordane Art Museum, Førde, Norway 128
- Kimbell Art Museum Expansion, Texas, USA 134

Conclusion 141
References 142

Background

Museums are big business, attracting billions of tourist dollars, advancing science, and educating and amusing more than 850 million people annually.

Their role is not well-understood or well-publicized. And then there's also the "boring" factor.

Night At The Museum (a 2006 movie about a watchman who discovers museum exhibits come to life at night) honed in on the stereotype of museums as boring ... but filled with really cool stuff.

in our research, we are trying to explore what others have done and will be doing to report on the direction museum architecture is taking.

we tried to study a diverse types of museums, archaeology, art, natural history. away from museums types, we also tried not to foucs on a certain region but to study museums from Europe, North America, and North Africa.

When the term museum was first used in the renaissance in reference to private collections, it evoked a different experience from what we know now. In one of the museum's earliest forms, the Cabinet of Curiosities, natural and art objects were all mixed up together on the walls and ceilings, cupboards and drawers of one or two rooms. Their purpose was to surprise and delight, viewers had to find the special objects that attracted them and then make their own connections.

Duty began to be more important with the creation of the public museum, museums increasingly divorced art from a lived experience and elevated it to the status of a secular religion, museums became a sacred spaces.

19th century museums imitated the places for which some of the art had been made: skylit galleries whose proportions, colors and moldings provided a complementary framework for the art on exhibition.

By the early 20th century, new museums were replacing these architecturally articulated rooms with open space, often illuminated only by artificial light. Now the contemporary art is no more a secular religion, the idea of sacred museum space is obsolete.

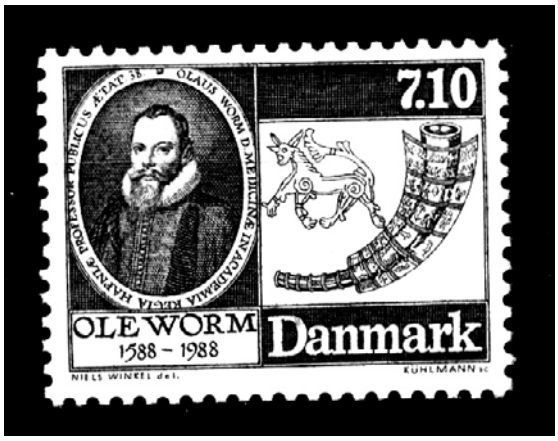
Now we can see the Museum as Entertainment, exhibits is just one of several cultural attractions offered by the museum. Shopping, eating, performances, now compete with the preservation and exhibition of art as museum mandates

A History Of Museums

The word museum has classical origins. mouseion "seat of the Muses" a place of contemplation. The word museum was revived in 15th-century Europe to describe the collection of Lorenzo de' Medici in Florence, but the term conveyed the concept of comprehensiveness rather than denoting a building.

By the 17th century museum was being used in Europe to describe collections of curiosities. Ole Worm's collection in Copenhagen was so called.

in England visitors to John Tradescant's collection in Lambeth (now a London borough) called the array there a museum; the catalogue of this collection, published in 1656, was titled Musaeum Tradescantianum. In 1677 the collection, having become the property of Elias Ashmole, was transferred to the University of Oxford.



Source: http://wunderkammerbrewing.com/?p=16

A building was constructed to receive it, and this, soon after being opened to the public in 1683, became known as the Ashmolean Museum.

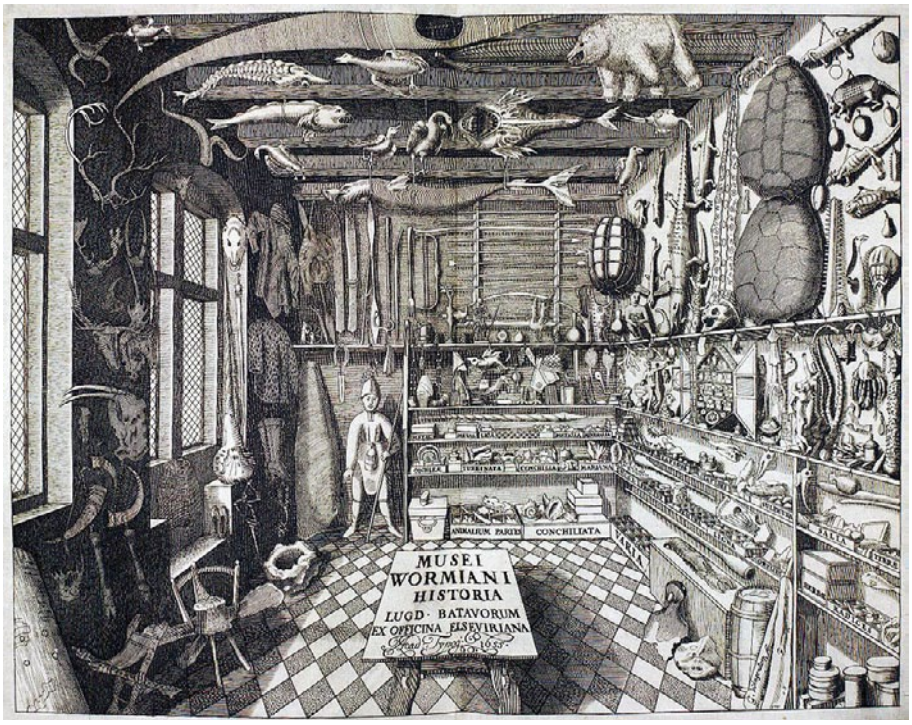
Although there is some ambivalence in the use of museum in the legislation, drafted in 1753, founding the British Museum, nevertheless the idea of an institution called a museum and established to preserve and display a collection to the public was well established in the 18th century. Indeed, Denis Diderot outlined a detailed scheme for a national museum for France in the ninth volume of his Encyclopédie, published in 1765.

Use of the word museum during the 19th and most of the 20th century denoted a building housing cultural material to which the public had access. Later, as museums continued to respond to the societies that created them, the emphasis on the building itself became less dominant. Open-air museums, comprising a series of buildings preserved as objects, and ecomuseums, involving the interpretation of all aspects of an outdoor environment, provide examples of this. In addition, so-called virtual museums exist in electronic form on the Internet. Although virtual museums provide interesting opportunities for and bring certain benefits to existing museums, they remain dependent upon the collection, preservation, and interpretation of material things by the real museum.

rooms whose walls and ceilings, cupboards and drawers, housed private collections that included a bizarre spectrum of natural curiosities as well as art objects.

Ole Worm's cabinet of curiosities, "Museum Wormianum", 1655.
Image source: http://en.wikipedia.org/wiki/File:RitrattoMuseoFerranteImperato.jpg

The bizarre was collected together with sober specimens with no real order or organization.



Cabinet Ferrante Imperato (Naples 1599).
Image source: http://en.wikipedia.org/wiki/File:Musei_Wormiani_Historia.jpg

early in the 19th century, the homes and studios of artists such as Peter Paul Rubens, one of the great artist collectors of the Baroque period, were early models for the museum.

Rubens Self-portrait
Image source: http://bit.ly/UiZ4BL

Rubenshuis (Rubens House) interior (L) exterior (R)
Images source: http://en.wikipedia.org/wiki/Rubenshuis

as new collections were put together in the 19th & 20th centuries, private individuals also began to commission architecture for them.

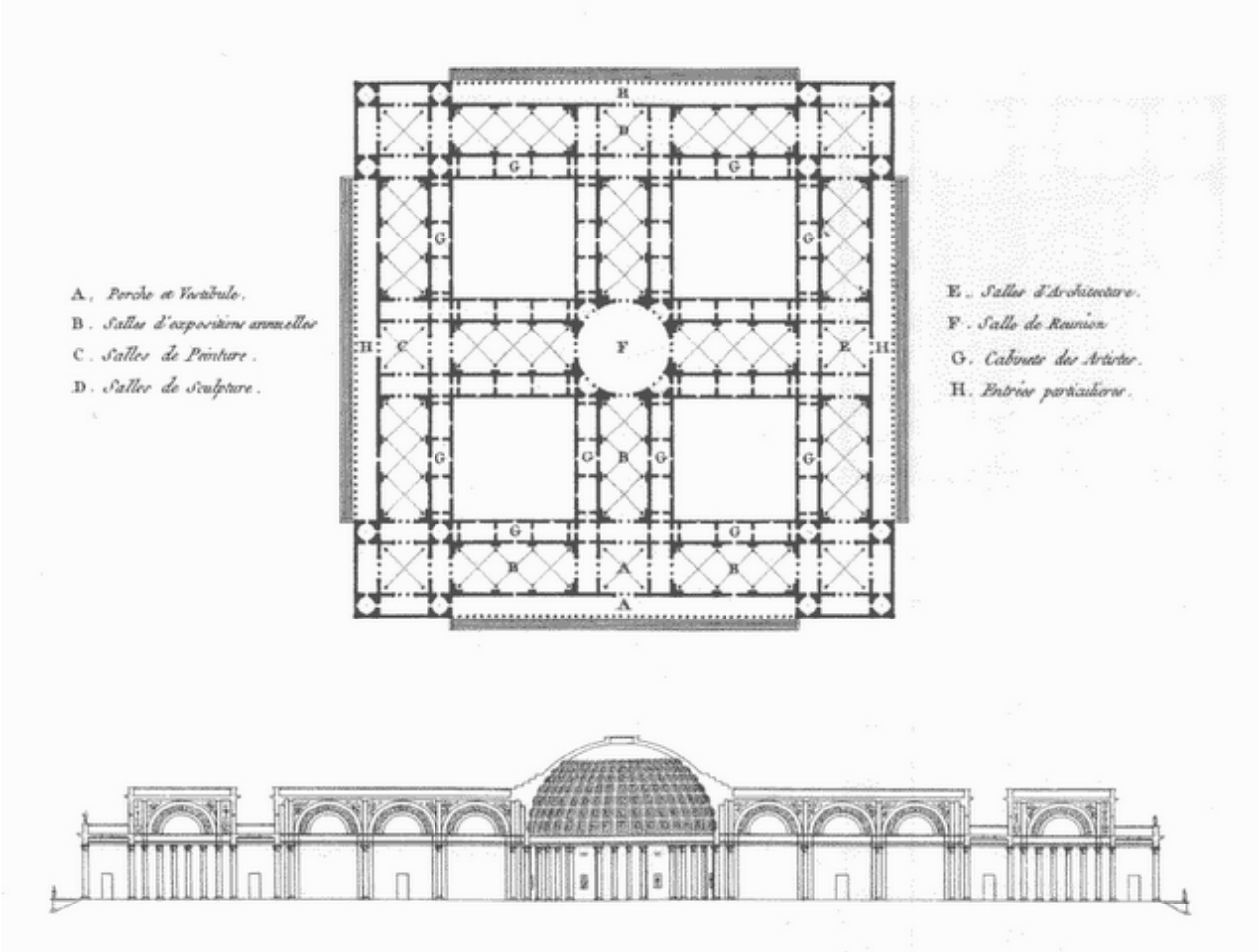
new collectors, concerned with enjoyment and study and the advancement of knowledge.

schoolchildren sketch a zoologist in 1938. stuffed koala bear and baby under the guidance of a museum.
Image source: http://www.npr.org/templates/story/story.php?storyId=97377145

museum then built for the worship of art replaced churches built for the worship of God.

dome and colonnade in 1803 for a museum project by J.N.L. Durand established a typology for the exterior, gallery enfilades for the interior

museums banned all architectural articulation for fear that eye might stray from art; also frequently banned was natural light



Jean-Nicolas-Louis Duran: Design for a Museum: Floorplan and Section, aus: J.N.L. Durand Précis des lecons d´architecture, Bd. 2, Paris 1803
Source: https://picasaweb.google.com/lh/photo/WUqUz5R18ClrejPZkNAx5w

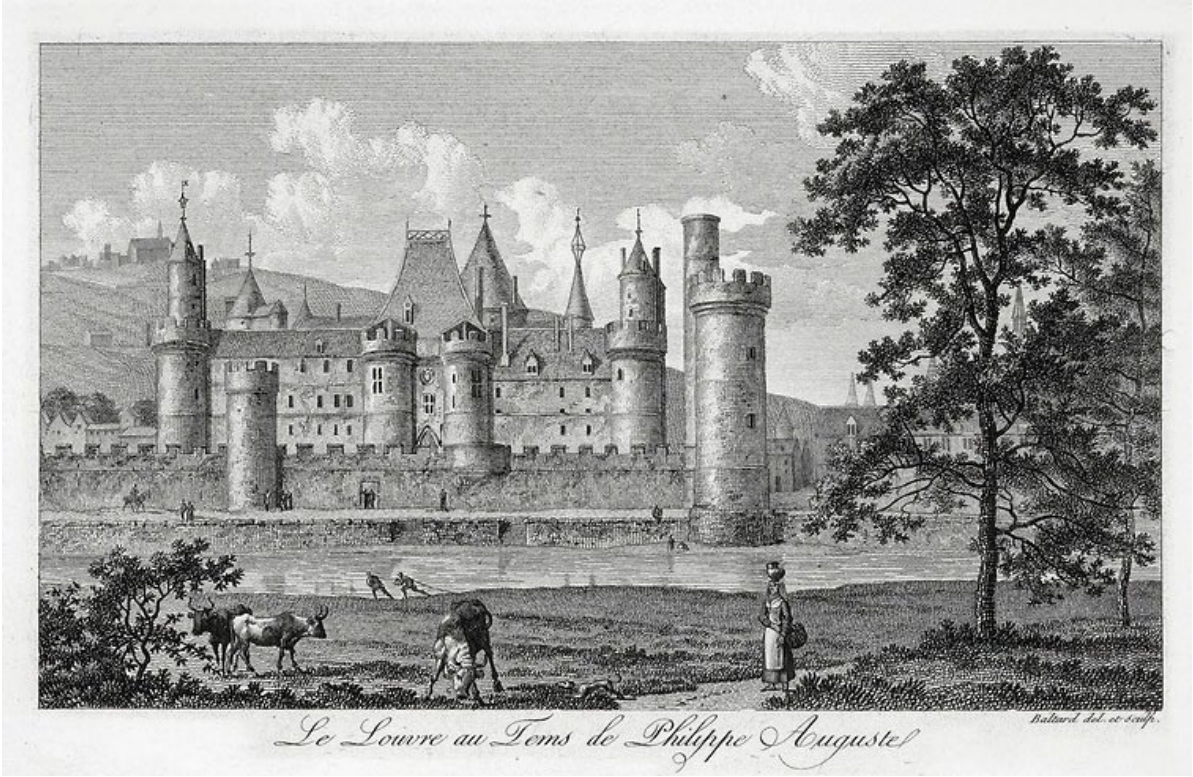
19th Century Museums & before

the Louvre, Paris (1793)

the world's first national collection.
one of the largest art museums and palaces in the world. Located in Paris, France, it covers more than 40 acres on the north bank of the River Seine. The museum has about 275,000 works of art, including about 5,000 paintings.

Louvre museum from "La Seine"
Source: http://www.flickr.com/photos/korayem/2610546178/

Philippe Auguste built the first Louvre as a Gothic fort about 1200. It was a sizable arsenal comprising a moated quadrilateral with round bastions at each corner, and at the center of the north and west walls. Defensive towers flanked narrow gates in the south and east walls. At the center of the complex stood the massive keep, the Grosse Tour. Two inner buildings abutted the outer walls on the west and south sides.



Louvre during Philippe Auguste 12C
Source: http://www.frenchfriends.info/travel-paris/louvre-museum

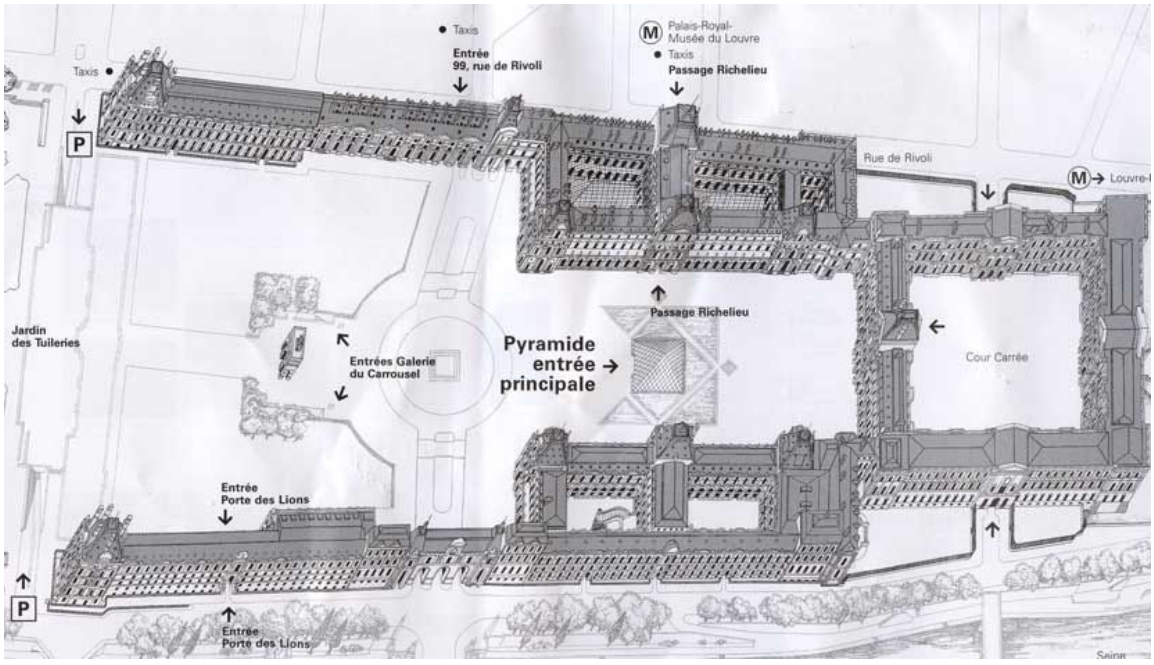
François I decided to take up residence in Paris. Francois I, who had been a prisoner of war in Italy, decided to build a palace more splendid than the great palaces of Italy.

Louvre Palace
Source: http://www.zeably.com/Louvre_Palace

Over the years, French rulers pursued enriching the castle with antiques and masterpieces until it became about 2500 piece in 1715. but they kept it for themselves in Royal court, some of them made the the castle their permenant residence such as "Francois II", "charle IX" and "henry III" and each of them modified the building according to their whims neglecting the antiques and masterpieces

louvre 1699
Source: http://robinsonlibrary.com/finearts/visual/museums/louvre.htm

In 1791, the National Assembly decreed that the Louvre and the Tuileries together "will be a national palace to house the king and for gathering together all the monuments of the sciences and the arts."



louvre plan
Source: http://www.parisshuttle.net/louvre-museum/

Gallery at the Louvre, 1793, the year it opened to the public.
Source: http://grupaok.tumblr.com/post/25105563007/gallery-at-the-louvre-1793-the-year-it-opened-to

The Museum Central des Arts opened its doors on August 10, 1793. Under the authority of the Minister of the Interior, its first governors were the painters Hubert Robert, Fragonard and Vincent, the sculptor Pajou, and the architect de Wailly. Admission was free, with artists given priority over the general public, who were admitted on weekends only. The works, mostly paintings from the collections of the French royal family and aristocrats who had fled abroad, were displayed in the Salon Carrée and the Grande Galerie.

interior, using natural and artificial light
Source: http://forum.arabia4serv.com/t52959.html

interior, using natural and artificial light
Source: http://forum.arabia4serv.com/t52959.html

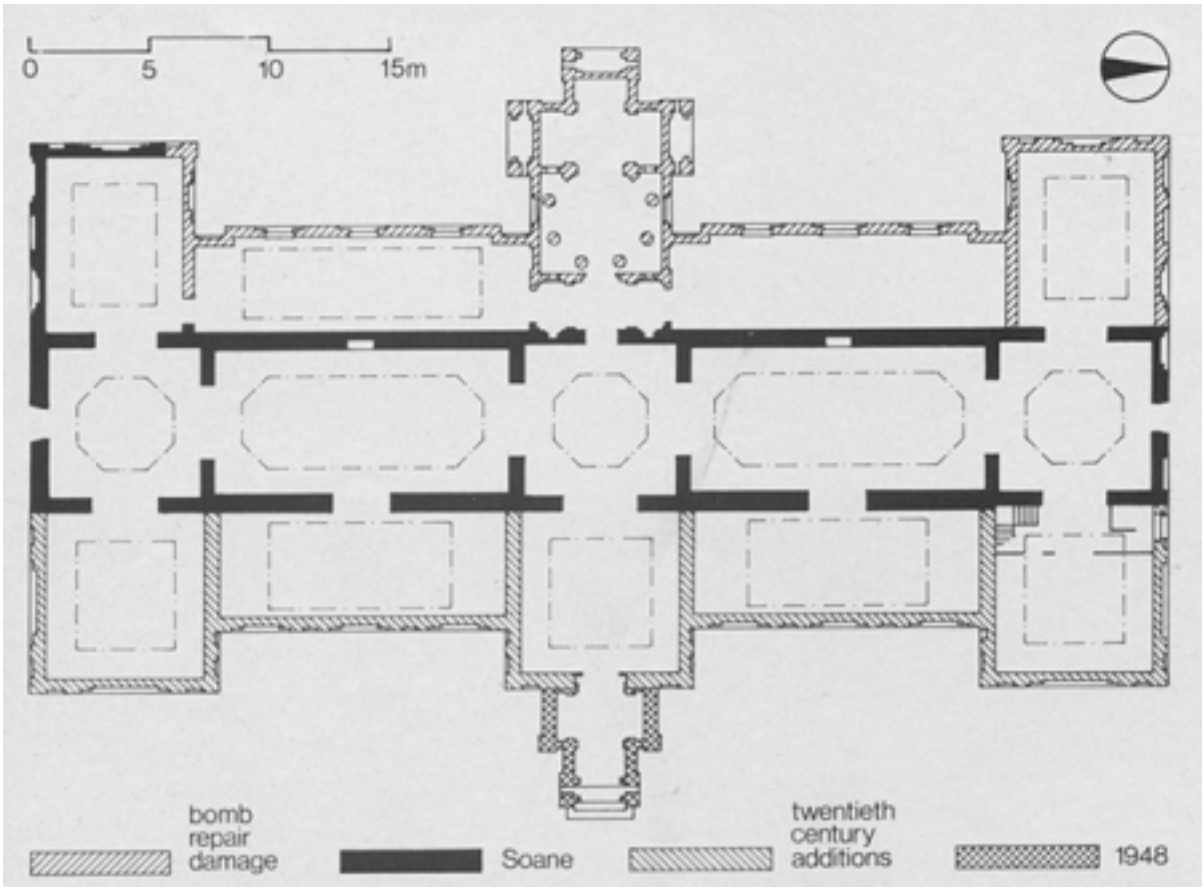
Dulwich Art Gallery, London (1811 – 14)

the first independent purpose-built picture gallery created in the British Isles, Built with a limited budget bequeathed by sir Francis Bourgeois; attached to one side is his mausoleum.

Dulwich Picture Gallery.
Image source: http://www.lambethchildrensuniversity.co.uk/learning-destinations/dulwich-picture-gallery

sir Francis Bourgeois mausoleum. Photo by Julian Osley
Image source: http://bit.ly/UtHZIU

the mausoleum from the south, decorated with urns, sarcophagi and sharm doors.
Source: Architects' Journal, 1985, April 24, p.44 - 65



Dulwich Picture Gallery plan.
Source: Architects' Journal, 1985, April 24, p.44 - 65

a series of interlinked rooms lit by natural light through overhead skylights has been the primary influence on art gallery design ever since. John Soane designed the sky lights to illuminate the paintings indirectly.

Dulwich Picture Gallery skylight lights ceiling.
Source: http://www.londonmuseums.org/

An interior view of the permanent collection of old master paintings in Dulwich Picture Gallery.
Image source: http://bit.ly/V4jHCg

"Soane has taught us how to display paintings"

Philip Johnson

An interior view in Dulwich Picture Gallery.
Image source: http://bit.ly/V4jHCg

inside the mausoleum.
source: Architects' Journal, 1985, April 24, p.44 - 65

Peale Museum, Baltimore (1813 - 14)

Peale Museum
Source: http://www.loc.gov/pictures/item/md0143.photos.205116p

the first structure in the United States expressly intended as a museum. Having no model for the design on a public museum, long adapted the standard five bay house plan, enlarging the center into a tripartite pavilion.

The central entrance employed a latrobean motif. a screen of two doric columns set before a recessed entrance hall

Baltimore's Peale Museum
Source: http://www.flickr.com/photos/monumentcity/4328016381/

Baltimore's Peale Museum, September 1936 second story front room
Source: http://1.usa.gov/WOphrW

The Peale Museum, the Municipal Museum of Baltimore, was a collection of paintings and natural history created by Charles Willson Peale; first building in western hemisphere with be built as a museum

Interior of Front Room in Peale's Museum, 1822
Source: http://bit.ly/VBx1kj

the British Museum, London (1823 – 46)

British Museum entrance.
source: http://www.rathfern.lewisham.sch.uk/roger-federer-class-visit-the-british-museum

[R] Sir Robert Smirke's west wing under construction (July 1828).
source: http://en.wikipedia.org/wiki/File:P8282318.1.JPG

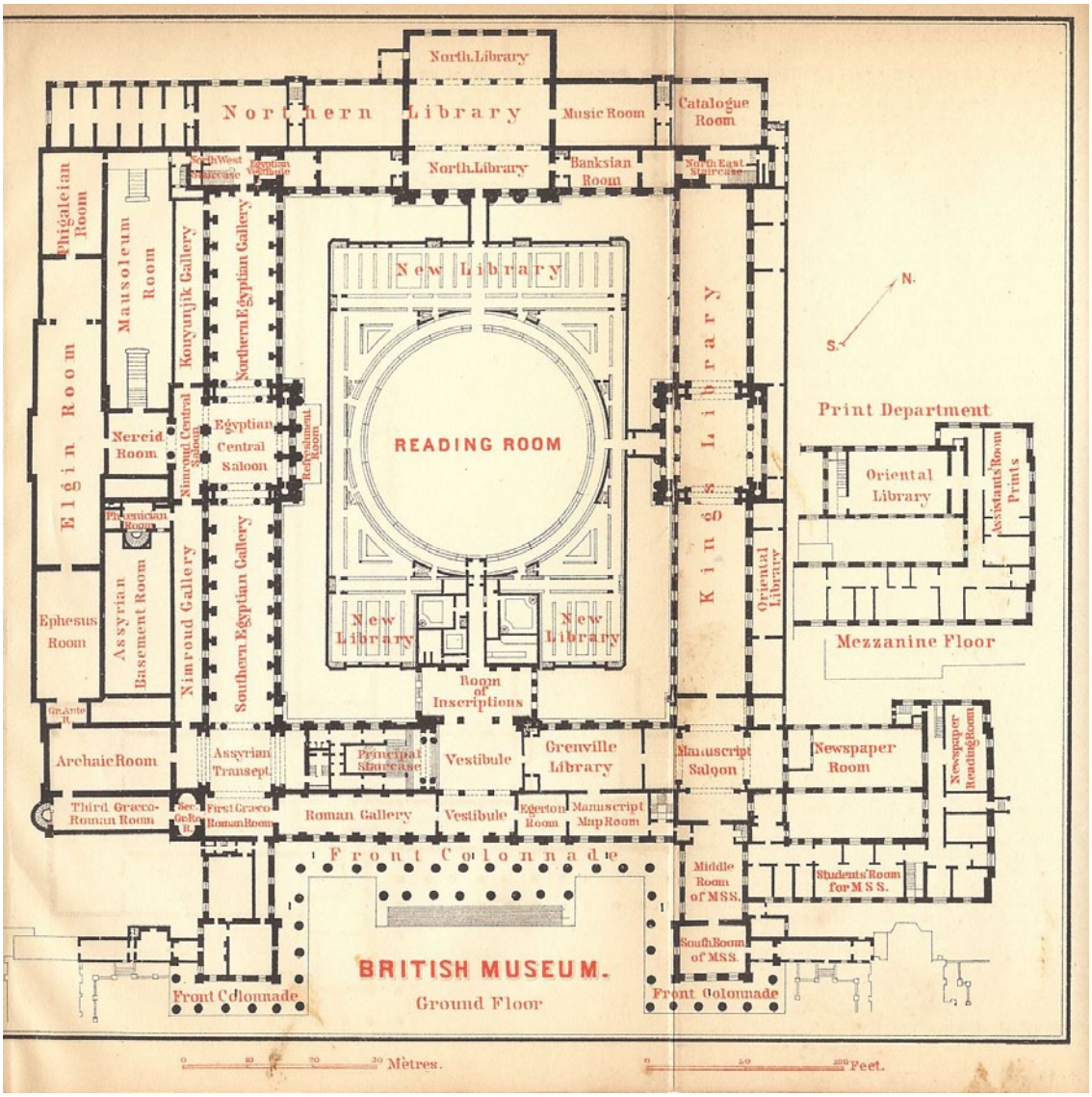
The core of today's building, the four main wings of the British Museum, was designed in the nineteenth century. Other important architectural developments include the round Reading Room with its domed ceiling and the Norman Foster designed Great Court which opened in 2000

Quadrangle building

The core of today's building was designed by the architect Sir Robert Smirke (1780–1867) in 1823. It was a quadrangle with four wings: the north, east, south and west wings.

The monumental South entrance, with its stairs, colonnade and pediment, was intended to reflect the wondrous objects housed inside.

Proposed British Museum Extension, 1906.
source: http://en.wikipedia.org/wiki/File:BM;_Archives_-_Impression_of_the_proposed_extension.jpg

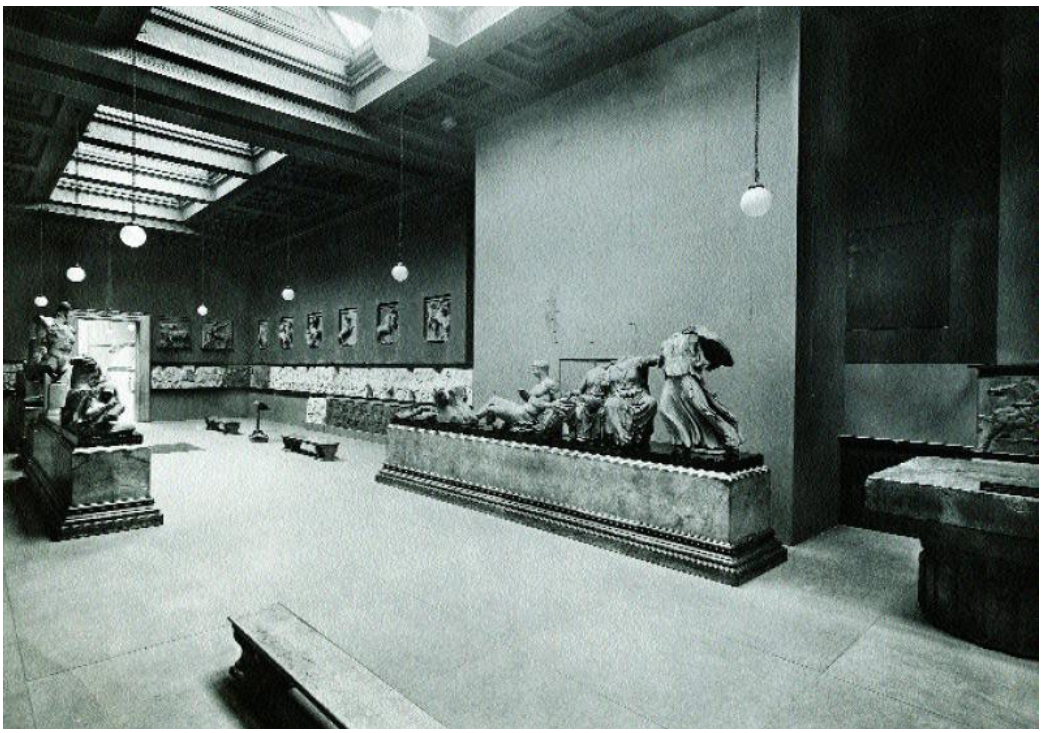


Ground floor plan.
source: http://moodemapcollector.blogspot.com/2011/08/plan-of-british-museum-1894.html

Smirke designed the building in the Greek Revival style, which emulated classical Greek architecture. Greek features on the building include the columns and pediment at the South entrance

entrance columns.
source: http://www.flickr.com/photos/68457656@N00/1338886120/

The building was completed in 1852. It included galleries for classical sculpture and Assyrian antiquities as well as residences for staff



Natural and Artificial lighting.
source: http://en.wikipedia.org/wiki/File:British_Museum,_The_Elgin_Room,_1937.jpg

Artificial light.
source: [L]: http://en.wikipedia.org/wiki/File:Egyptian_Gallery.JPG
[R]: http://en.wikipedia.org/wiki/File:BM,_GMR_-_RM21,_Mausoleum_of_Halikarnassos.JPG

Natural light.
source: http://bit.ly/XjRmrI

Artificial light.
source: http://bit.ly/UAzlqk

National Gallery, London (1833 - 8)

The National Gallery is an art museum on Trafalgar Square, London. Founded in 1824, it houses a collection of over 2,300 paintings dating from the mid-13th century to 1900

Trafalgar Square, London - Jun 2009
Image adopted from: http://en.wikipedia.org/wiki/File:Trafalgar_Square,_London_2_-_Jun_2009.jpg

The National Gallery was not formed by nationalising an existing royal or princely art collection. It came into being when the British government bought 38 paintings from the heirs of John Julius Angerstein, an insurance broker and patron of the arts, in 1824.

It used to be claimed that this was one of the few national galleries that had all its works on permanent exhibition.

The National Gallery opened to the public on 10 May 1824, housed in Angerstein's former townhouse on No. 100 Pall Mall, it was then frequently overcrowded and hot and its diminutive size in comparison with the Louvre in Paris was the cause of national embarrassment.

The paintings displayed in Angerstein's house.
Image source: http://bit.ly/UxUtPH

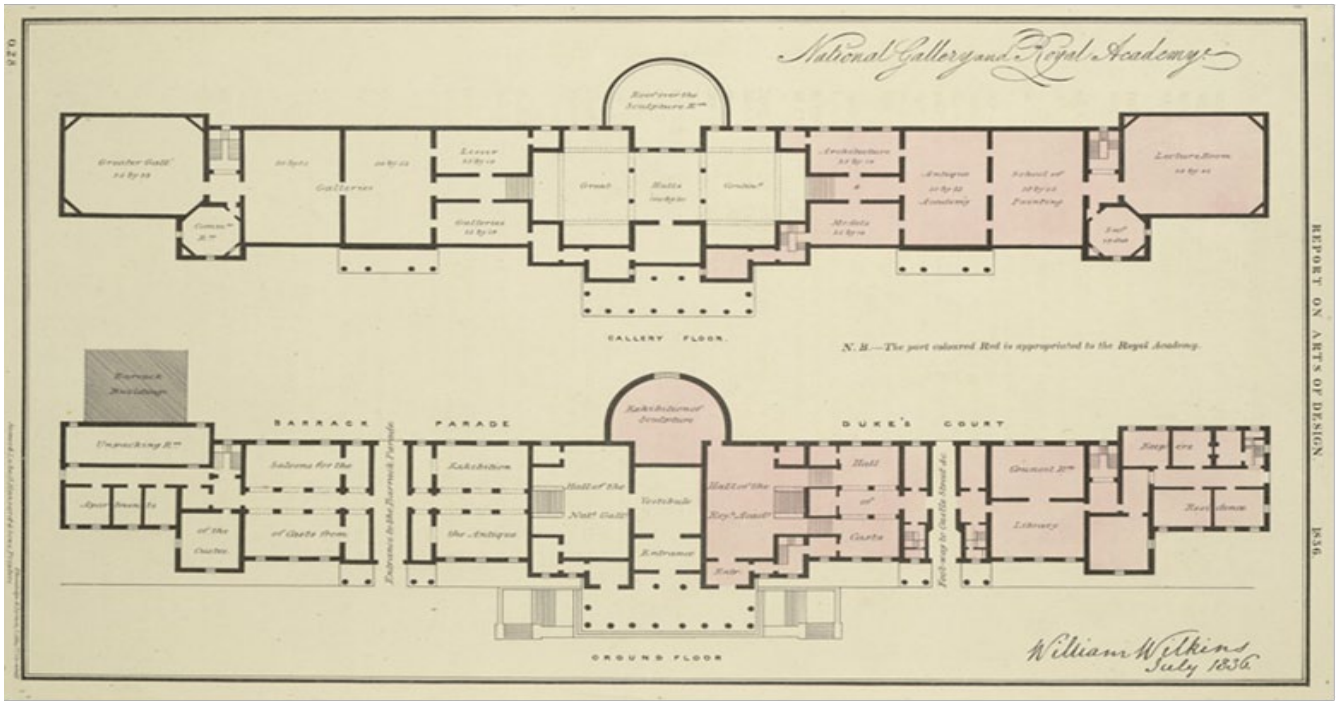
100 Pall Mall, the home of the National Gallery from 1824 to 1834.
Image Source: http://bit.ly/TItr9J

National Gallery, london, main facade.
Image source: http://www.flickr.com/photos/ianvisits/3135579420/

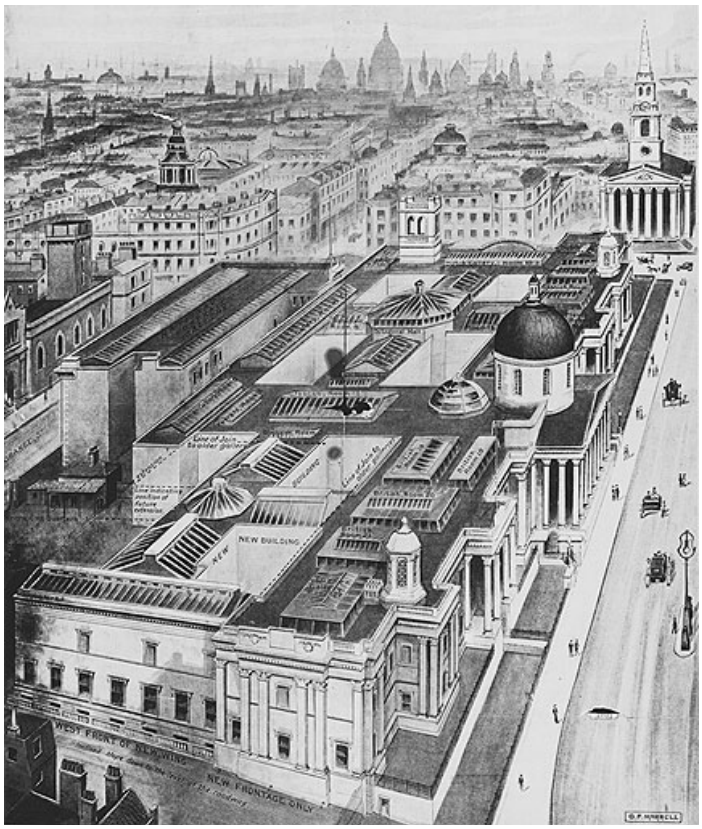
There was a lot of public criticism of the National Gallery's building and in 1869 after much discussion, it was decided that the existing building should remain, and a new wing should be added. This was completed in 1876, and added seven new exhibition rooms at the east end, including the impressive dome.

the current building is notable for it's **Greek style**, the extended façade here owes something to Chambers's Somerest House.

The main vertical axis, the intended circulation spine of the gallery gives guidance as to the overall structure of the layout



Plans before expansion. Areas shaded in pink were used by the Royal Academy until 1868. © The British Library.
Image Source: http://www.bl.uk/onlinegallery/onlineex/crace/n/007000000000013u00037000.html



The National Gallery, 1910.
Image source: http://bit.ly/WZbGnE

National Gallery, London 1861.
Credit: RIBA Library Photographs Collection. Ref No: RIBA13238
Image Source: http://bit.ly/YTPRX2

The National Gallery 1886, Interior of Room 32.
Image source: http://bit.ly/UqBc1v

Following are some images showing the use of natural and artificial indirect light.

The National Gallery, Interior of Barry Room.
Image source: http://bit.ly/U5UjwU

Image source: National Gallery virtual tour
http://www.nationalgallery.org.uk/visiting/virtualtour/

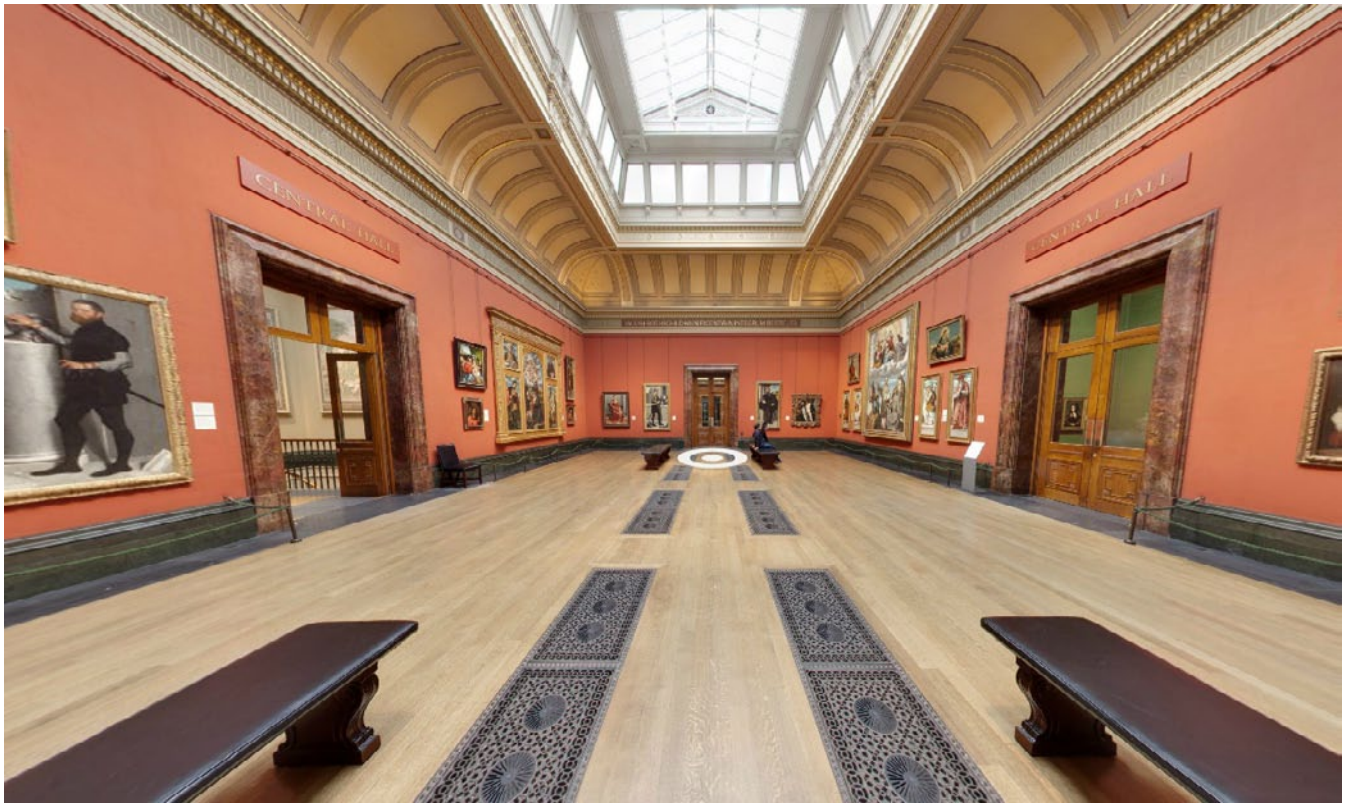


Image source: National Gallery virtual tour
http://www.nationalgallery.org.uk/visiting/virtualtour/

Image source: National Gallery virtual tour
http://www.nationalgallery.org.uk/visiting/virtualtour/

Fitzwilliam Museum, Cambridge (1837 – 47)

The FitzWilliam is the Cambridge University museum.

It was founded in 1816 when Richard, VII Viscount FitzWilliam of Merrion bequested his own collection of art and library to the Cambridge University and £100000 to build this museum.

It was described by the Standing Commission on Museums & Galleries in 1968 as “one of the greatest art collections of the nation and a monument of the first importance”.

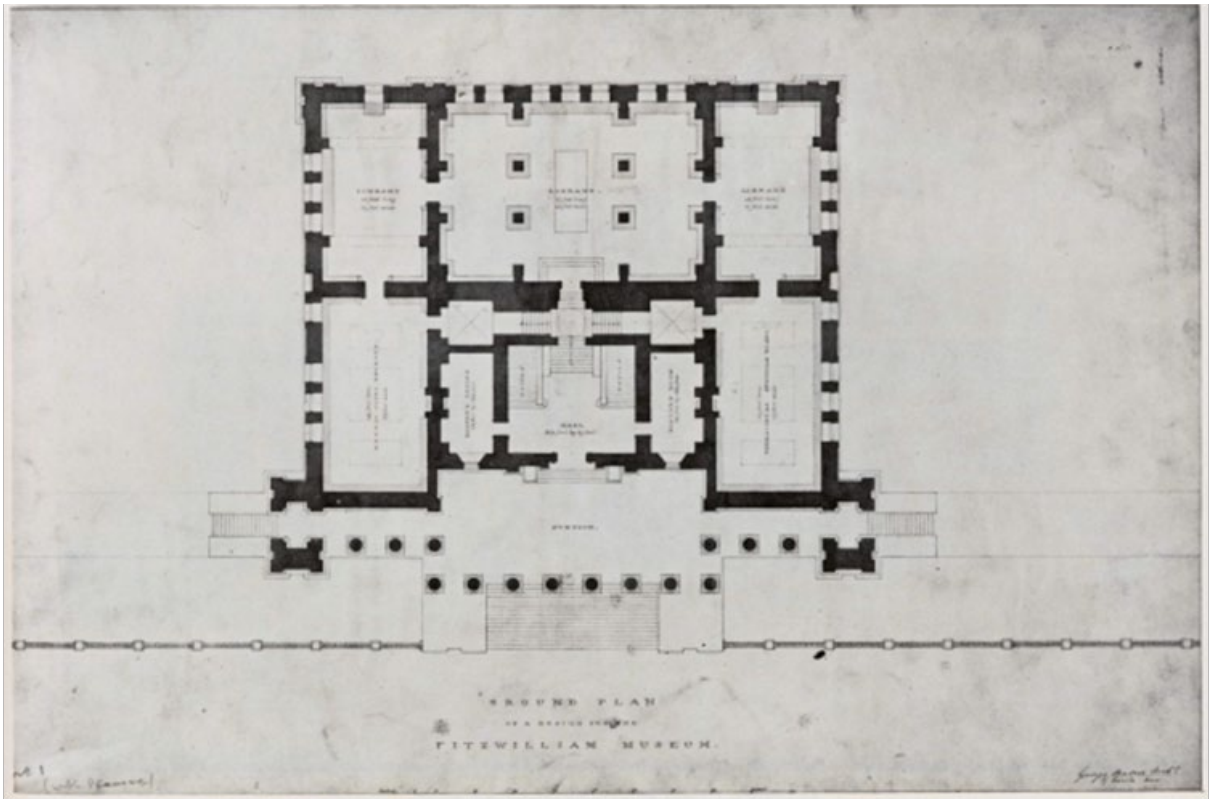
The building was designed by English architect George Basevi who was a pupil of the Sir John Soane, an English architect who was specialised in the Neo-classical style and famous for designing the Dulwich Picture Gallery

Fitzwilliam Museum main facade.
Image source: http://en.wikipedia.org/wiki/File:FitzwilliamMuseum.jpg

"one of the most telling examples in the country of the turn away from the purity of neo-Greek towards a Victorian Baroque which took place in the thirties and forties."

Nikolaus Pevsner

Corinthian Octastyle Portico: Fitzwilliam Museum, Cambridge. Illustration for Knight's Pictorial Gallery of Arts (London Printing and Publishing, c 1860).
Image source: http://bit.ly/10J6tRH



Floor plan of the Fitzwilliam Museum, George Basevi.
Image source: http://bit.ly/132aT50

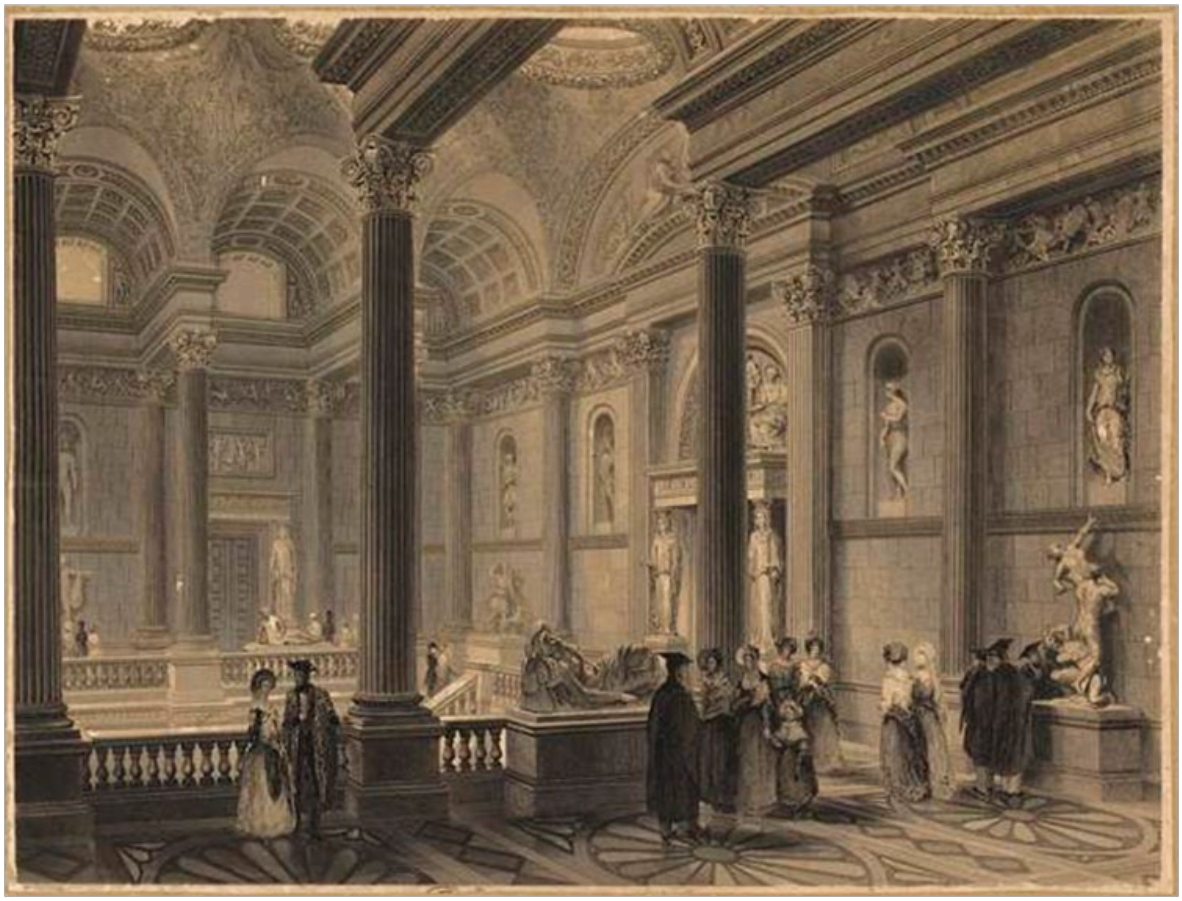
The main entrance to the museum is a fine example of the Neo-Classical style of architecture.

Inspired by the buildings of the Ancient Grece and Rome. Basevi designed a 'temple' of art to house the collections of Viscount Fitzwilliam.

Part of the grand entrance to the museum
Image source: http://bit.ly/132fJ24

Following the Entrance hall, still functions as a Victorian sculpture gallery showcasing a range of neo-classical statuary, including the massive marble caryatids flanking the doorways into Gallery 3.

A series of portrait busts commemorate some of the key personalities associated with the museum collection, whilst the niches on the upper walls house plaster copies of Greek and Roman masterpieces.



Entrance hall 1875
Image source: http://www.fitzmuseum.cam.ac.uk/visit/galleryguide/Place_43.html

Entrance hall
Image source: http://www.fitzmuseum.cam.ac.uk/visit/galleryguide/Place_43.html

Inside the museum.
Image source: http://wwwfs.org/2008/Cambridge_Jul08/

Inside the museum.
Image source: http://wwwfs.org/2008/Cambridge_Jul08/

thorvaldsens museum, Copenhagen, Denmark (1839 – 48)

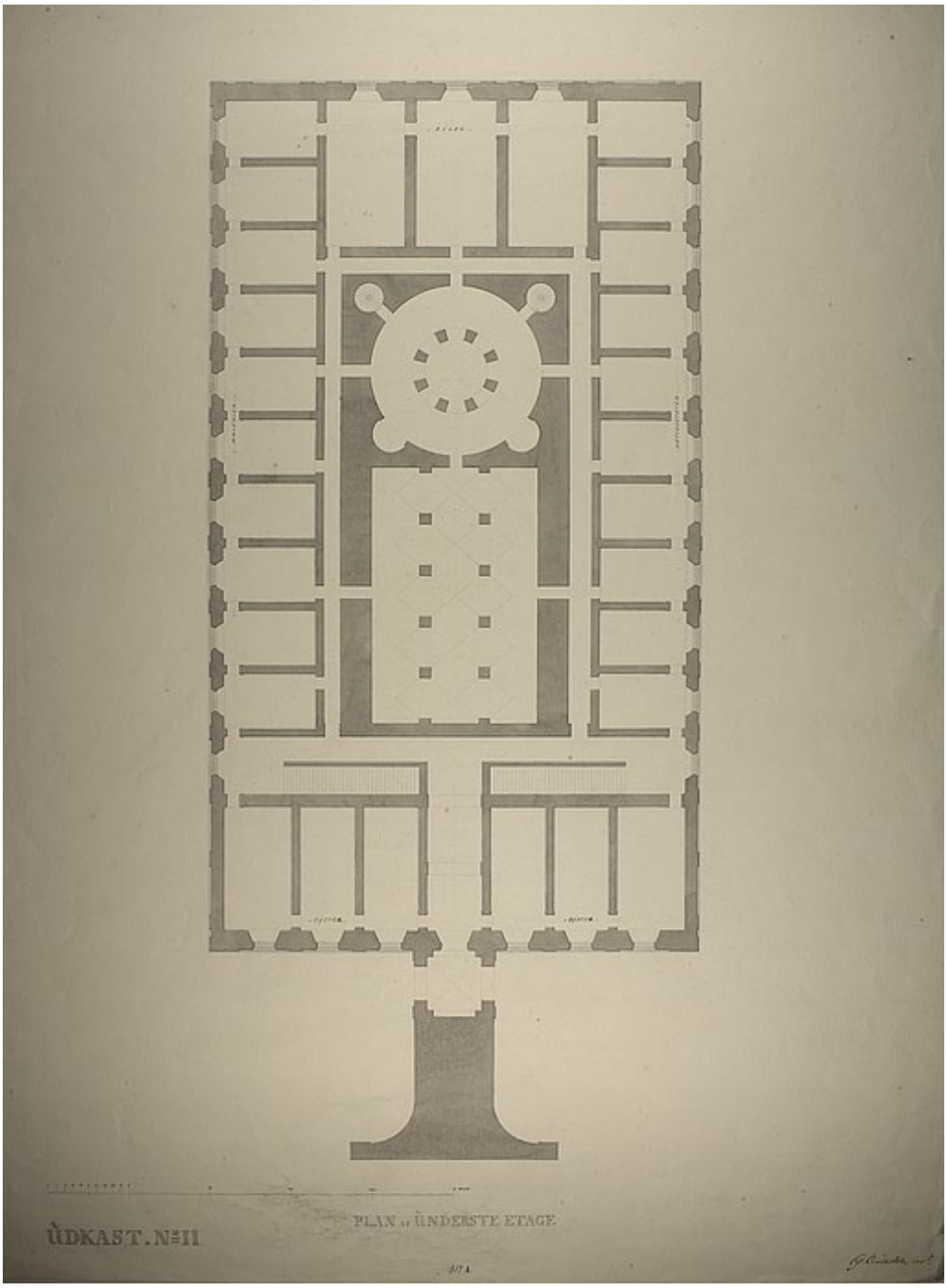
Greek Revival in spirit, the bold severity of its astylar forms recalls – in some extent – Egyptian architecture, especially in the internal courtyards. The barrel vaulted ceilings of the galleries are decorated in the pompeian style.

horvaldsens_Museum_facade
Source: http://www.thorvaldsensmuseum.dk/en/themuseum/themuseum

Thorvaldsen's Museum
Source: http://eng.archinform.net/projekte/4960.htm

The building is strongly inspired by antique Greek architecture and built around an inner courtyard where the artist is buried. It is particularly noteworthy for its unique use of colors both inside and outside. Every room in the museum has a unique ceiling decoration in the grotesque style.

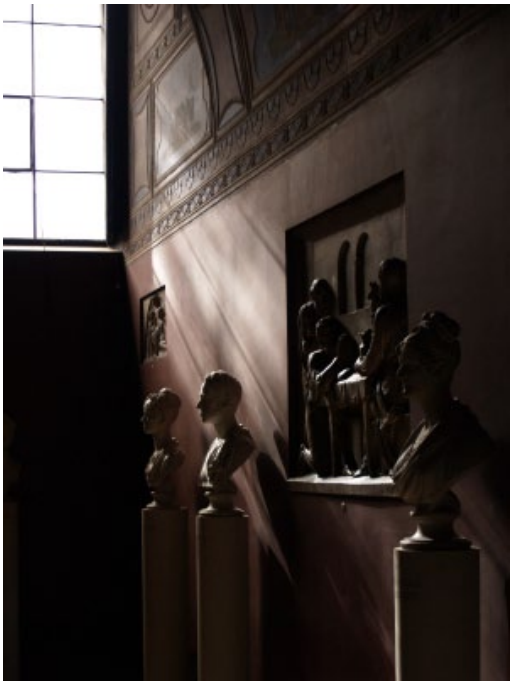
The outside is adorned with a frieze depicting Thorvaldsen's homecoming from Rome in 1838 made by Jørgen Sonne.



Thorvaldsens Museum, the Ground Floor Plan, 15.06.1839
Source: http://www.thorvaldsensmuseum.dk/en/collections/work/D1611

The Museum opened on September 18, 1848. It houses nearly all of the sculptor Bertel Thorvaldsen's original models for the sculptures he created for numerous European countries.

interior, using natural light
Source: http://www.kulturklik.dk/steder/thorvaldsens-museum



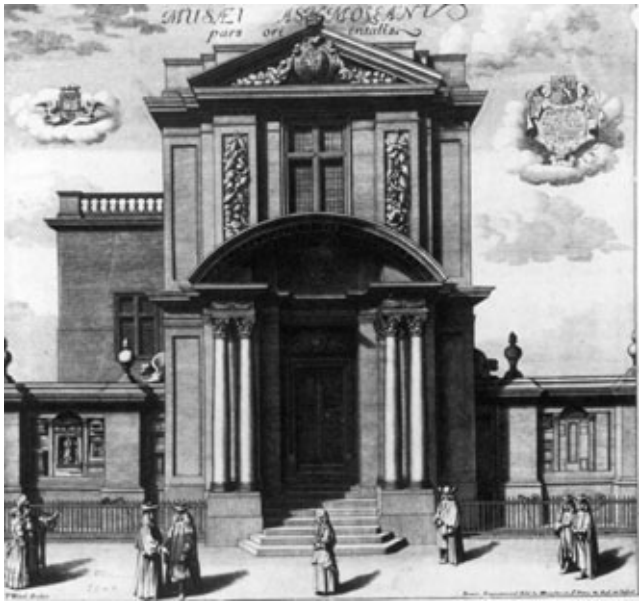
Natural lighting/ Display
Source: http://bit.ly/10rBNVq

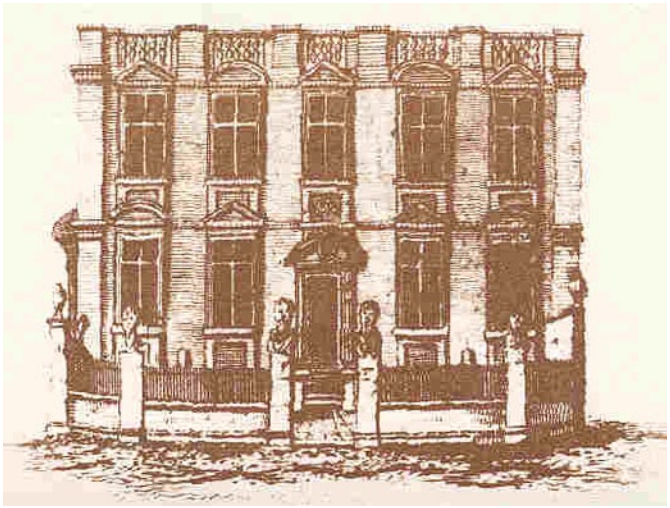
Natural lighting/ Display
Source: http://bit.ly/Wt5508

Ashmolean Museum, Oxford (1841 – 5)

The oldest public museum in Britain, and the first purpose-built public museum in the world. Opened 1683 to house the cabinet of curiosities Elias Ashmole.
The collection began modestly in the 1620s, The present Ashmolean was created in 1908 by combining two ancient Oxford institutions: the University Art Collection and the original Ashmolean Museum.
The Museum of the History of Science (or "Old Ashmolean") is a Grade I listed building (ref. 1485/149 and 149A). It was built in Headington stone by the University in 1679–83, and patched with Clipsham stone in 1960. It was the first museum in the world to open its doors to the public.

Ashmolean Museum, opened in 1683.
Now Museum of the History of Science.
Source: http://bit.ly/SjzfEZ

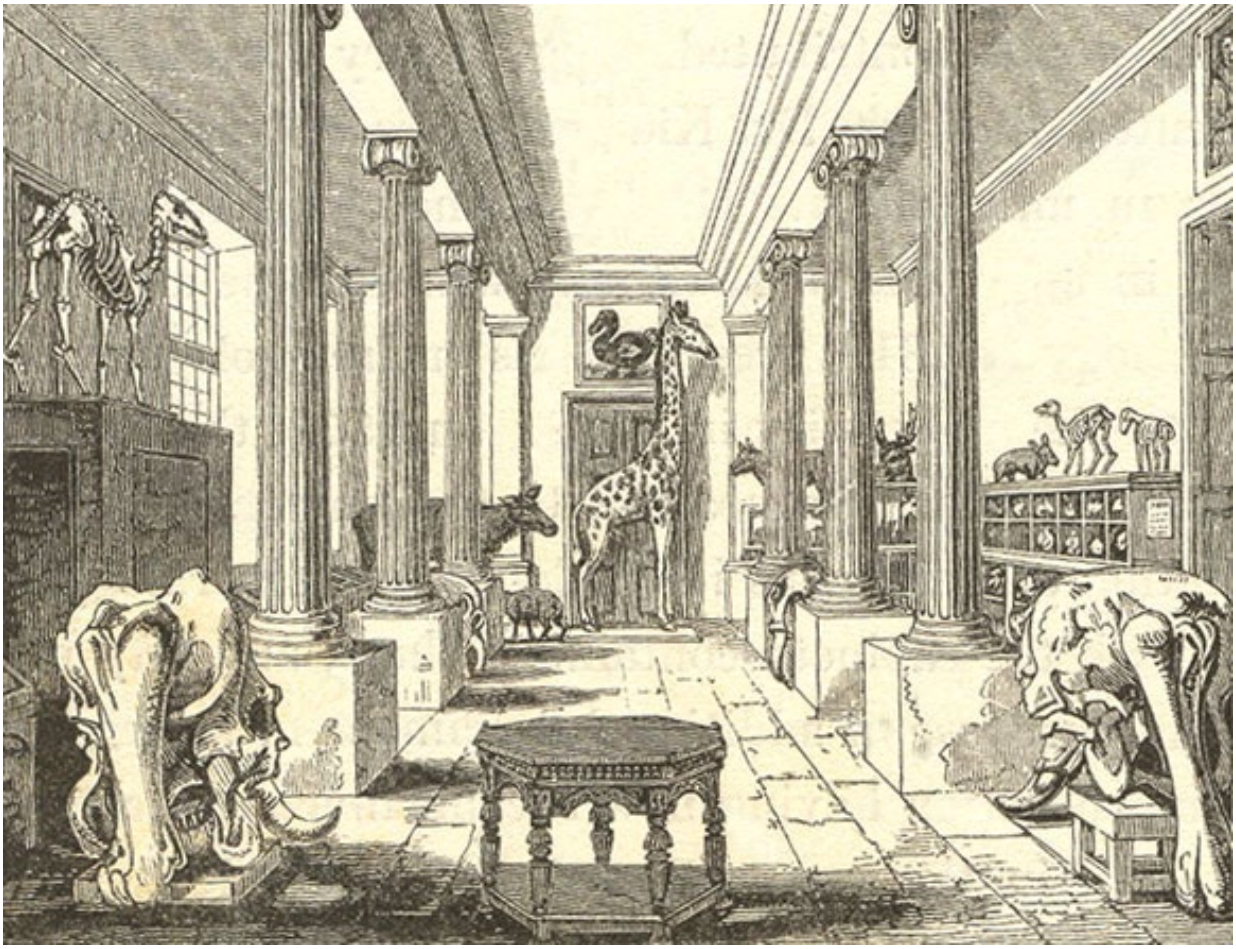

Engraving of the East Front of the Museum by Michael Burghers, 1685.
Source: http://www.mhs.ox.ac.uk/about/history/


Old Ashmolean Facade
Source: http://www.medicalheritage.co.uk/OXFORDSHIRE.htm

Old Ashmolean Facade
Source: http://www.headington.org.uk/oxon/broad/buildings/south/museum_histsci.htm

Antiquarian print of the former Ashmolean Museum, now the History of Science Museum. Oxford, UK
Source: http://www.flickr.com/photos/tylerbell/4894839127/in/photostream/

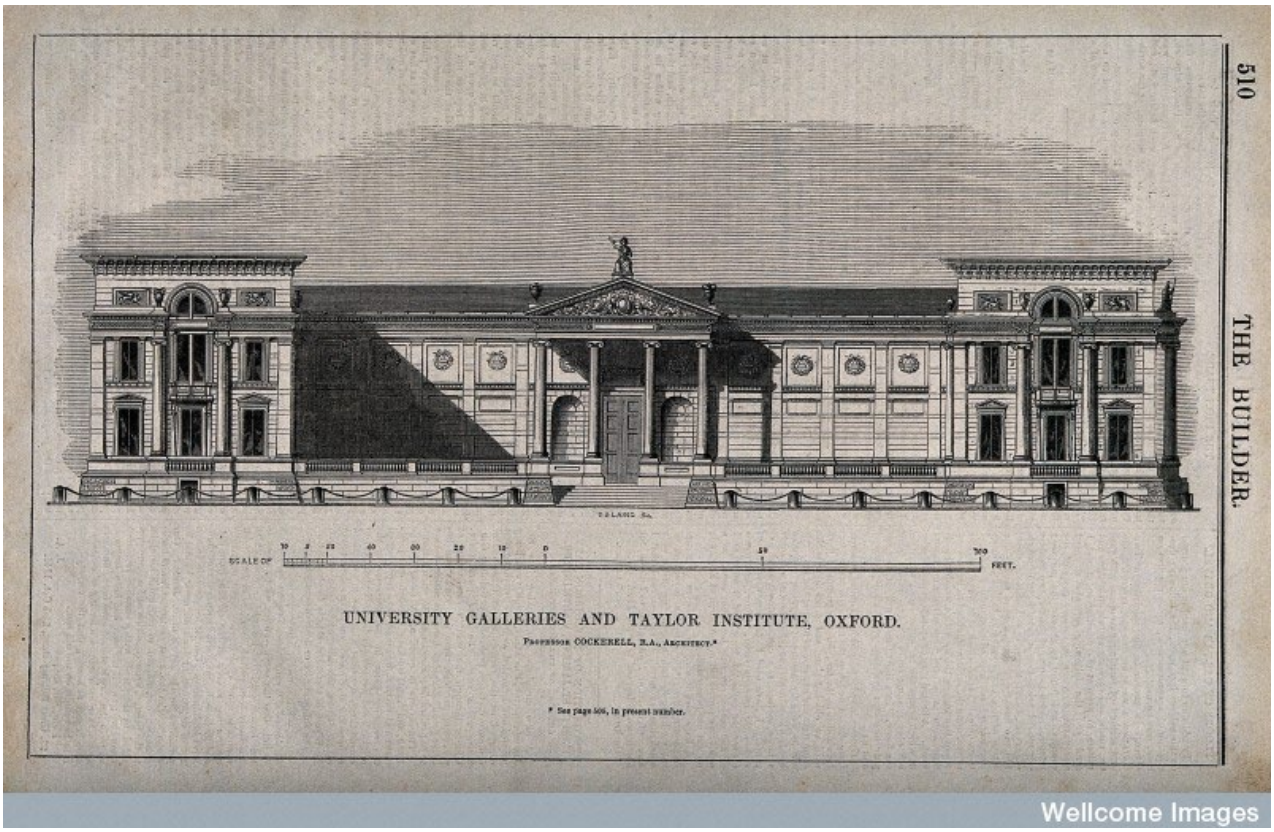
Antiquarian print of the former Ashmolean Museum, now the History of Science Museum. Oxford, UK
Source: http://www.flickr.com/photos/tylerbell/4895433220/in/photostream/



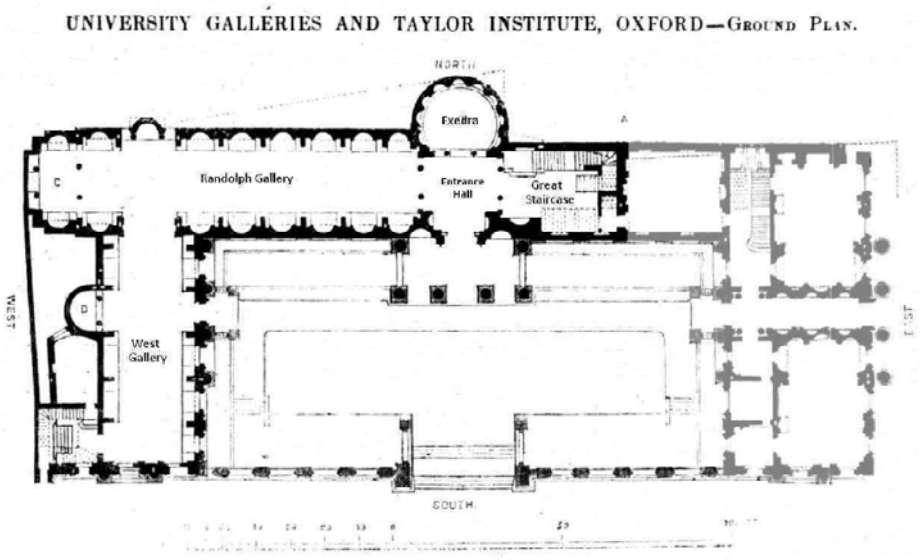
The above picture shows some of the exhibits in the lower room of the Museum in the mid-1840s.
Source: http://www.headington.org.uk/oxon/broad/buildings/south/museum_histsci.htm

Lithograph of the Special lecture given by William Buckland in the Old Ashmolean Museum, 15th February, 1823
Source: http://www.earth.ox.ac.uk/about_us/history

the modern languages faculty of the university, standing on the corner of Beaumont Street and St Giles' Street. This building dates from 1845-48 and was also designed by Charles Cocerell, using the Ionic order of Greek architecture



Ashmolean Museum and Taylorian Institute, Oxford: panoramic view. Wood engraving by C.D. Laing after C.R. Cockerell.
Credit: The builder October, 1846
Source: http://bit.ly/XMEA7f

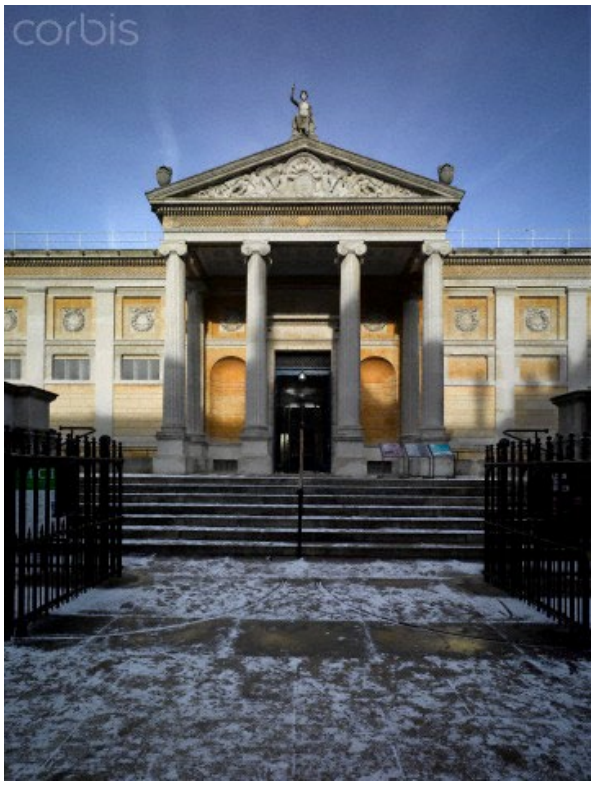


Ashmolean Museum and Taylorian Institute plan.
Credit: The builder October, 1846
Source: http://bit.ly/VdKYYd

Facade
Source: http://www.timetravel-britain.com/articles/museums/ashmolean.shtml

The present building dates from 1841-45. It was designed by Charles Cockerell in a classical style and stands on Beaumont Street.

Present ashmolean
Source: http://www.e-architect.co.uk/oxford/ashmolean_museum.htm



Ashmolean Museum of Art and Archaeology, Beaumont Street, Oxford. 1845
Source: http://bit.ly/VCCg34

Display and lighting were very primitive; using daylight lighting via façade vertical windows and by just spreading the artifacts all over the area of the building.

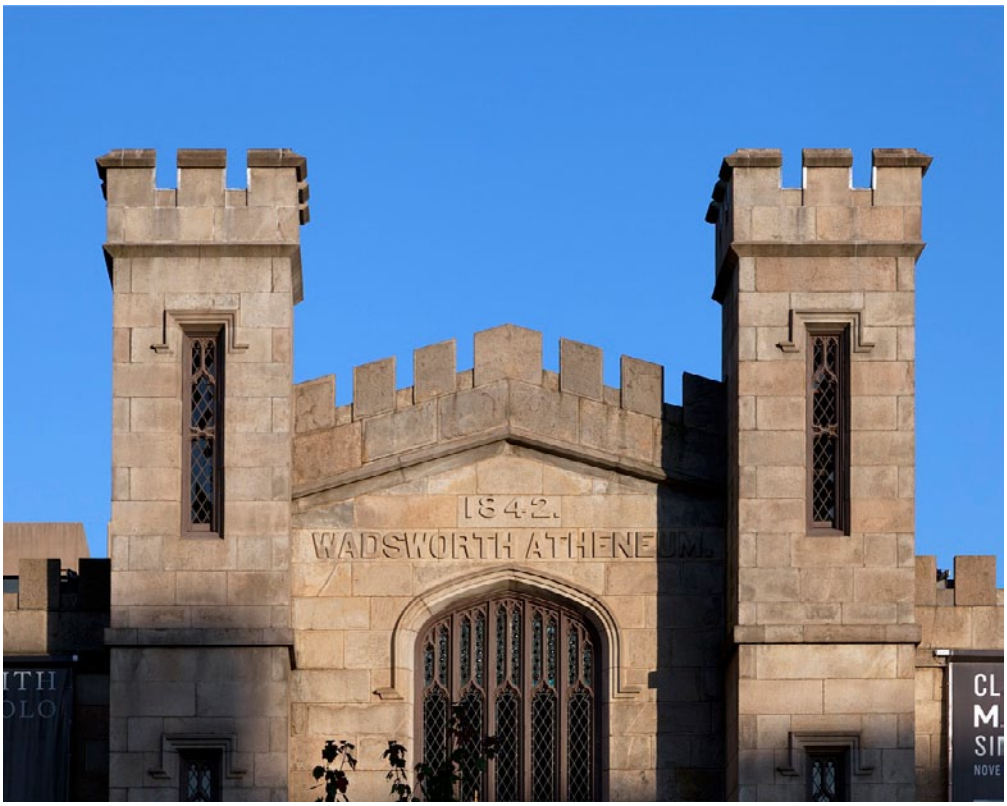
The Minoan Room at the Ashmolean Museum, 1910-1920.
Source: http://sirarthurevans.ashmus.ox.ac.uk/archive/exhibitions/

Interior - using natural light.
Source: http://www.coolplaces.co.uk/places/uk/england/oxfordshire/oxford/1242-the-ashmolean-museum

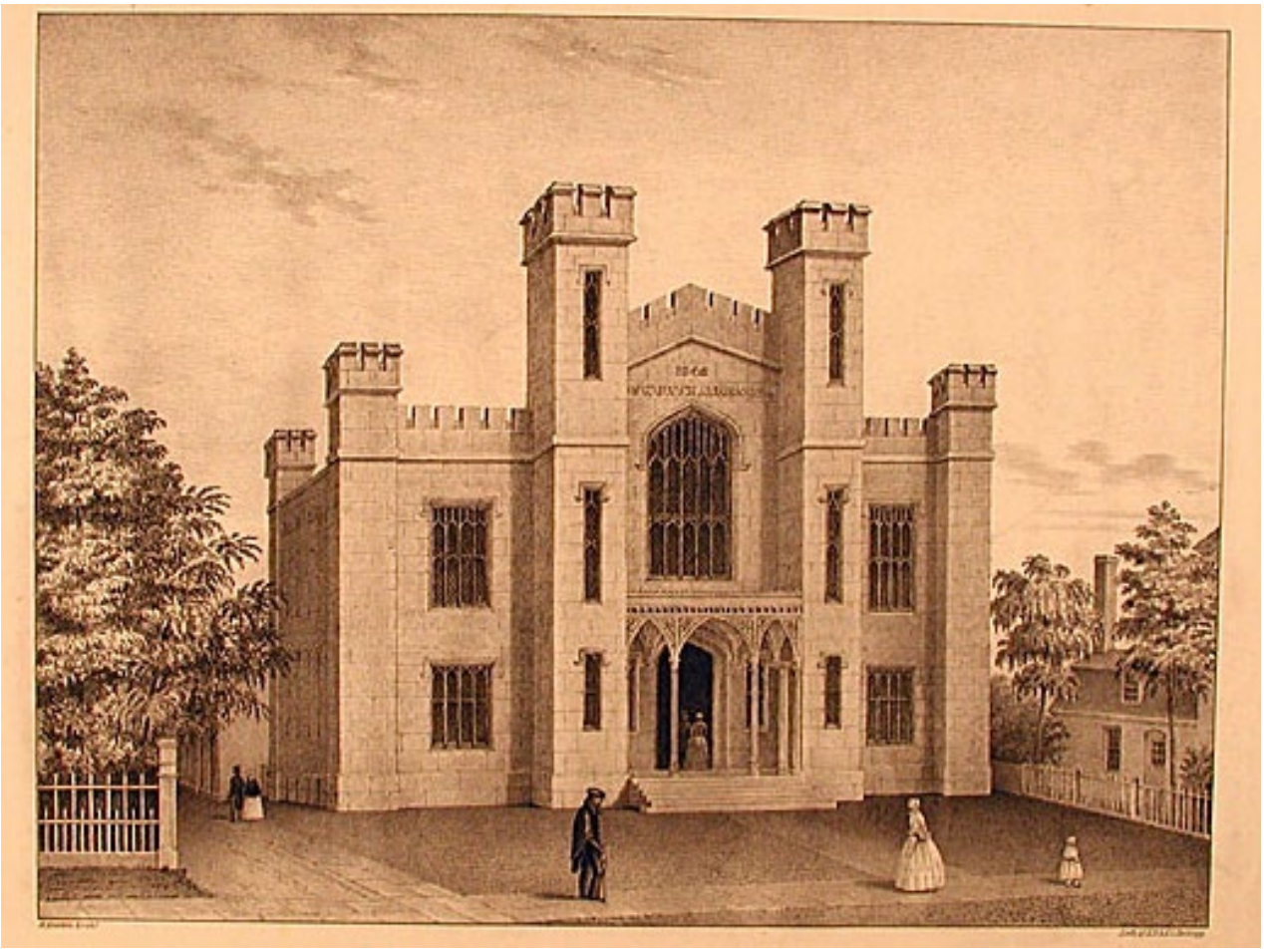
Wadsworth Atheneum, Connecticut, USA (1842- 44)

Gothic Revival Wadsworth building of 1844, introduced the fortress as a model, designed by the eminent architects Ithiel Town and Alexander Jackson Davis. It originally housed the art gallery

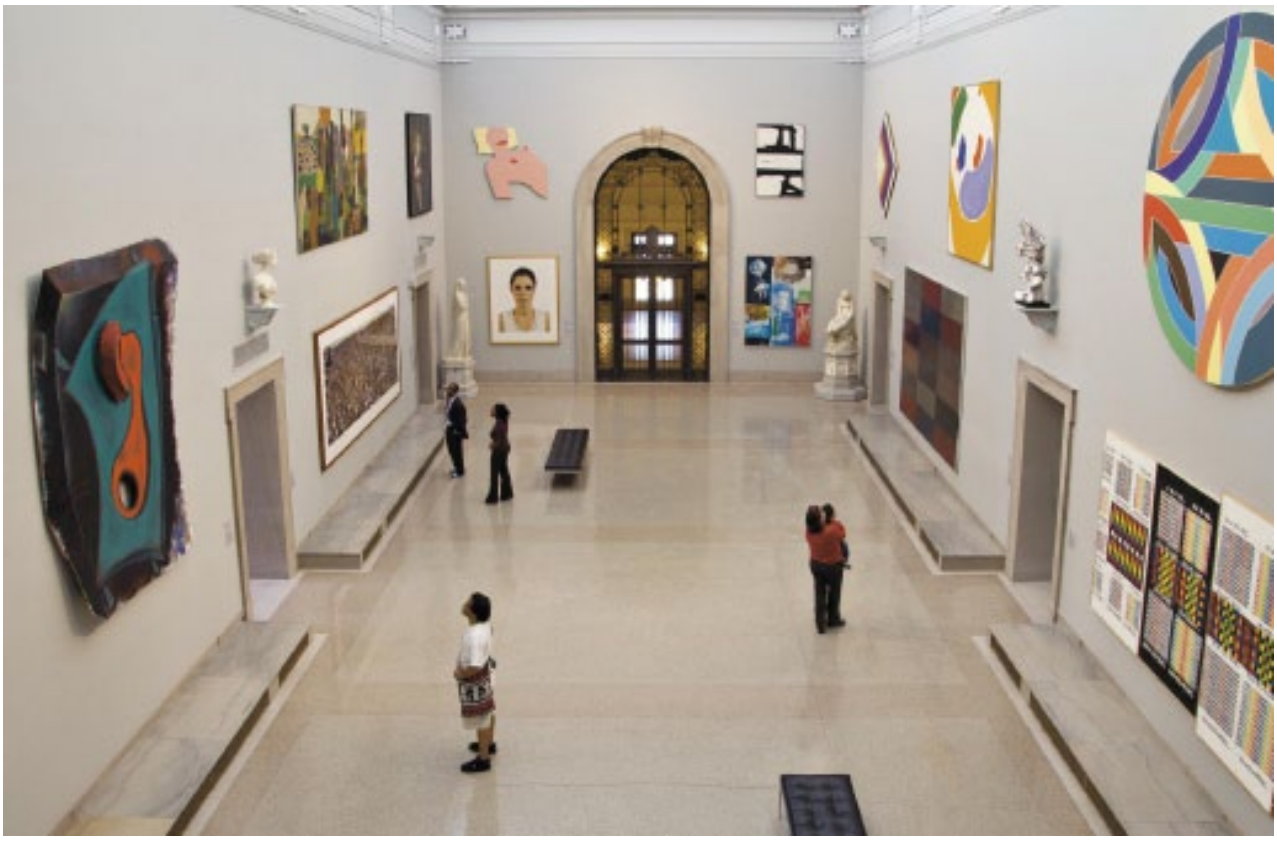
Wadsworth Atheneum.
Image source: http://bit.ly/VWBCcU



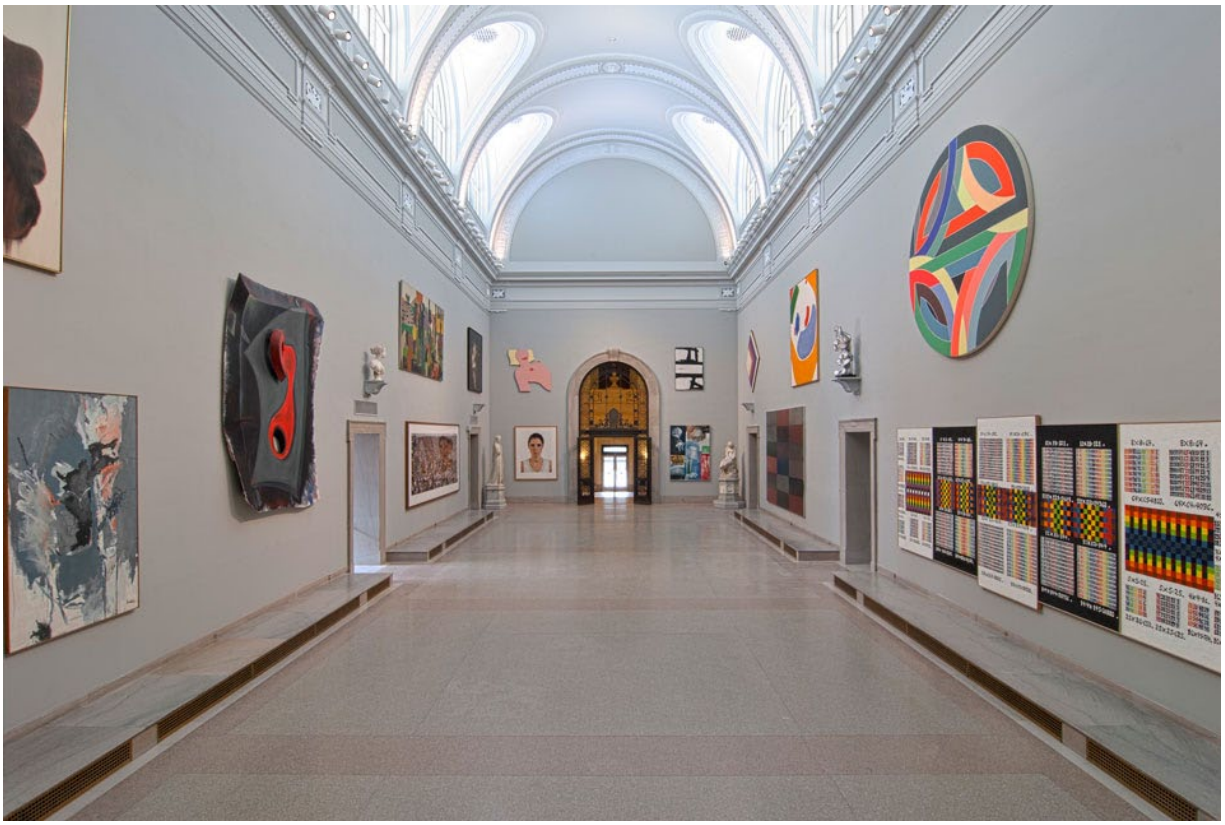
Wadsworth Atheneum, Hartford, Connecticut.
Credit: Library of Congress, Prints and Photographs Division
Image source: http://www.loc.gov/pictures/item/2012631274/



Wadsworth Atheneum. Lithograph, c. 1842-48.
Image source: http://www.explorethomascole.org/scrapbook/items/340



Inside Wadsworth Atheneum.
Credit: Wadsworth Atheneum Museum of Art 2011 annual report.
Image source: http://www.thewadsworth.org/wp-content/uploads/2011/11/2011-Annual-Report.pdf



Inside Wadsworth Atheneum. using natural & artificial lighting.
Image source: http://www.artdaily.org/index.asp?int_sec=11&int_new=47131#.UN4bVeRtjLs

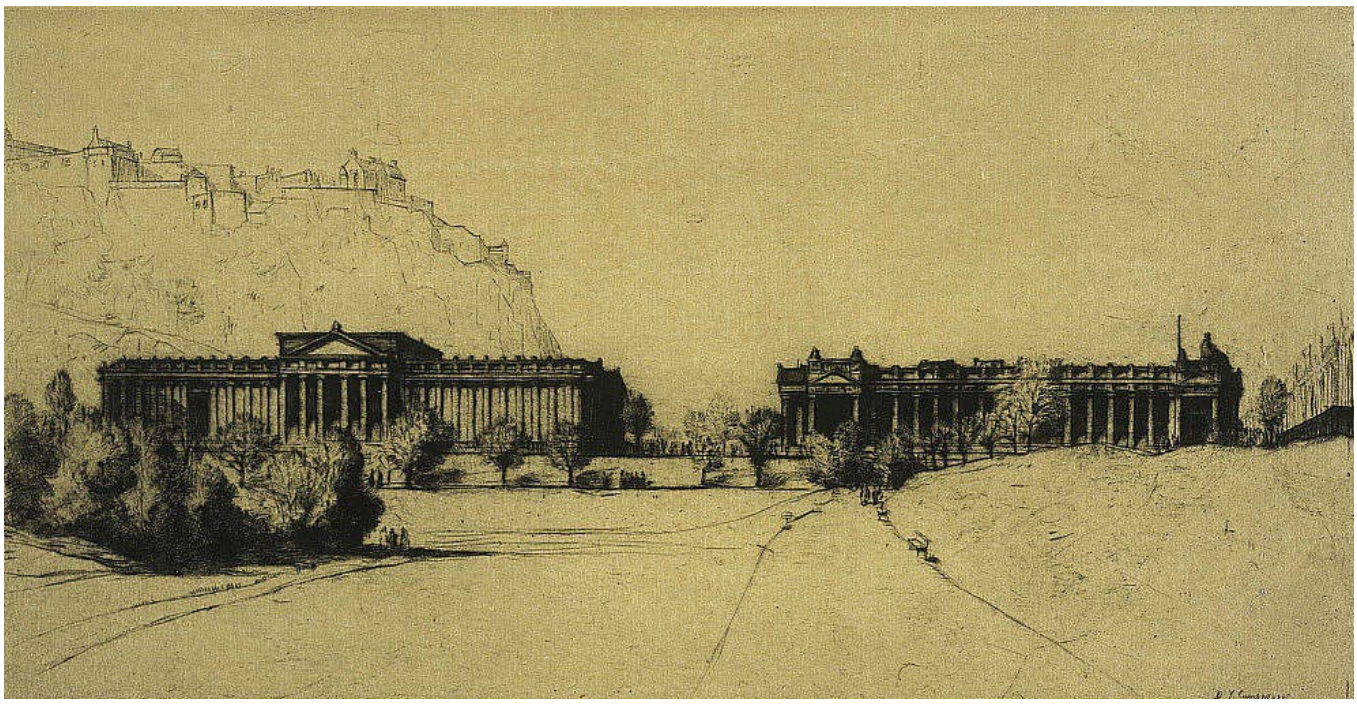
The Atrium at the Wadsworth Museum of Art. using natural & artificial lighting.
Image source: http://bit.ly/S36kGs

Inside Wadsworth Atheneum. using artificial lighting.
Image source [L]: http://bit.ly/Rru8lM
Image source [R]: http://bit.ly/WY6LzF

National Gallery of Scotland, Edinburgh (1850 – 4)

National Gallery of Scotland
Source: http://www.bbc.co.uk/arts/yourpaintings/galleries/collections/national-galleries-of-scotland-2643

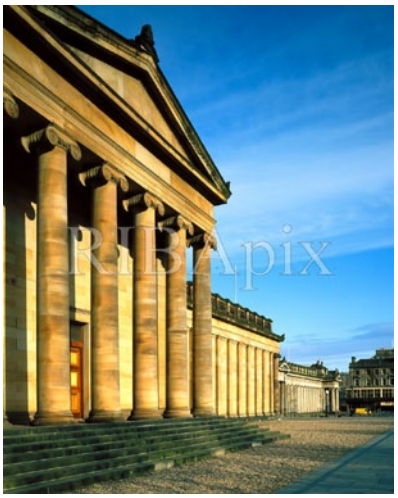
The National Gallery of Scotland, by William Henry Playfair (1790-1857). Completed 1854. The Mound, Edinburgh. This lies just to the south of the Royal Scottish Academy. Originally built to accommodate both the National Gallery and the Royal Scottish Academy



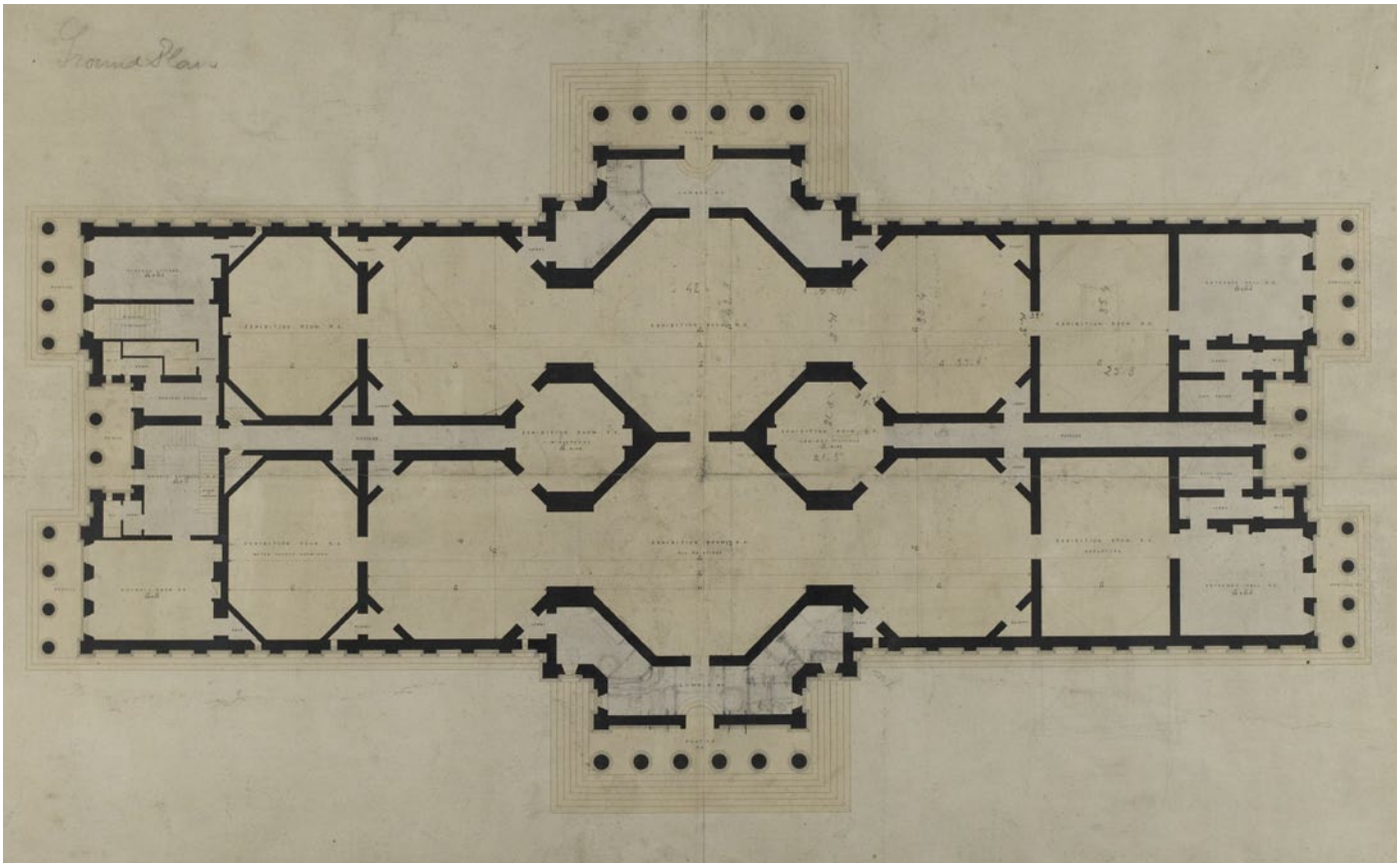
The Royal Scottish Academy Building and the Scottish National Gallery
Source: http://www.nationalgalleries.org/object/CAMERON.46

National Gallery of Scotland, The Mound, Edinburgh
Credit: RIBA Library Photographs Collection. Ref No: RIBA60287
Image Source: http://bit.ly/UX182z

For the Royal Scottish Academy building, Playfair had chosen the Doric order, and designed a programme of sculptural decoration to reflect its inhabitant's interest in ornament and design. For scenic effect, he made a deliberate contrast in his designs for the National Gallery building and opted for the graceful Ionic order. His two classical temples to the arts achieved a picturesque harmony with the dramatic backdrop of Edinburgh Castle.

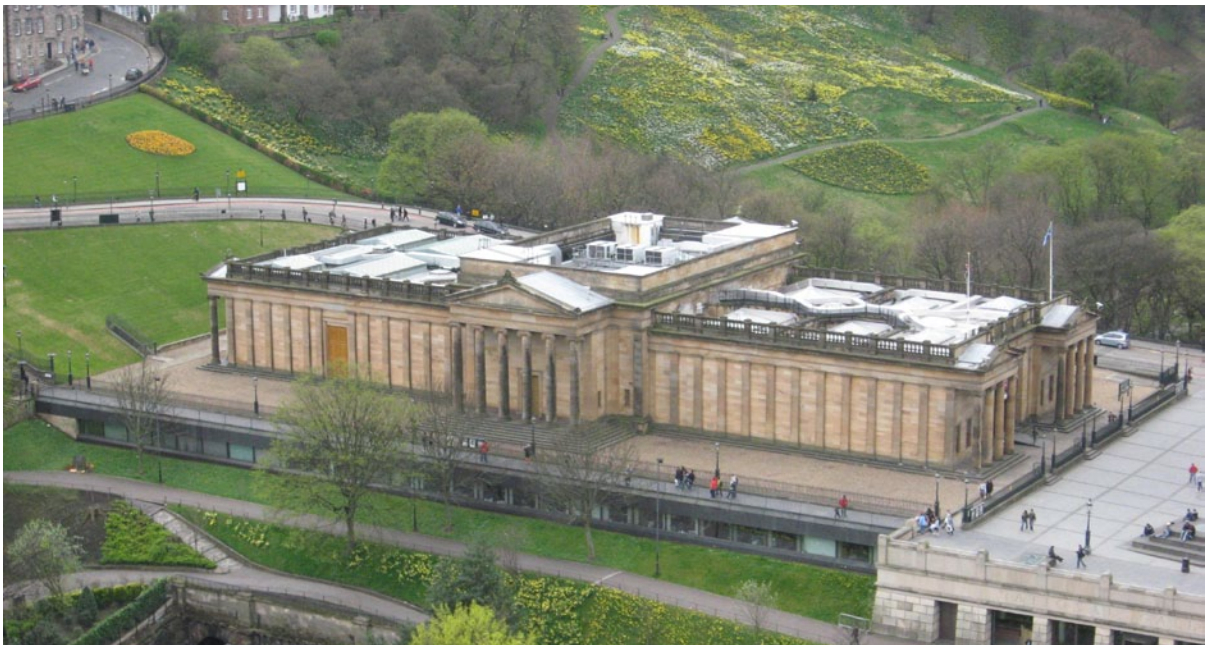


Source: http://bit.ly/Wd63Ng



National Gallery of Scotland, The Mound, Edinburgh: Ground Plan
Source: http://www.scotlandsplaces.gov.uk/search_item/index.php?service=NAS&id=RHP6526/102

it has double porticos to the north and south as well as a central portico on each flank, "all very austere and abstract with unfluted orders, though relieved (or compromised) by the crowning balustrade"



National Gallery of Scotland, The Mound, Edinburgh: aerial view
Source: http://bit.ly/WfWjCZ

Interior of the National Gallery of Scotland, c.1867-77
Source: http://clogic.eserver.org/2-2/prior.html

interior, using natural and artificial light
Source: http://www.nationalgalleries.org/media/_file/education/visitingngs_slideshow_1.pdf

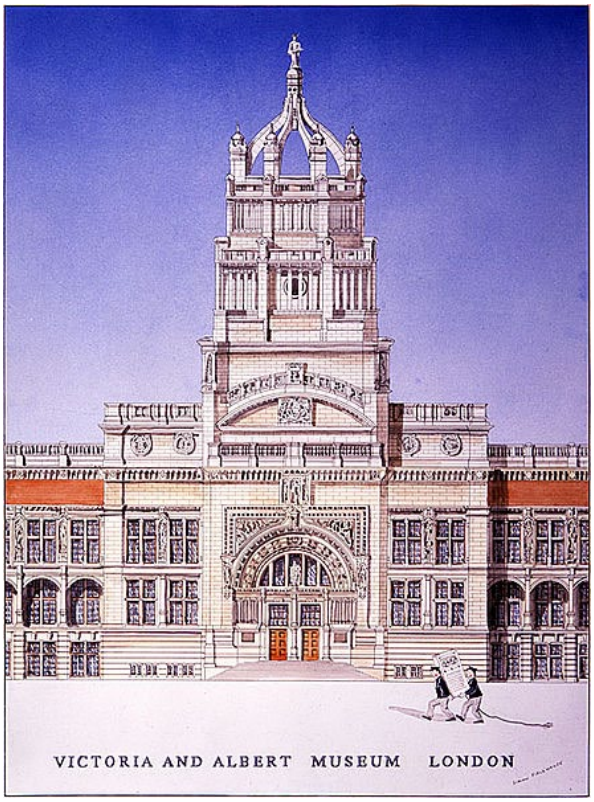
Victoria and Albert Museum, London 1851

Named after Prince Albert and Queen Victoria, its origins in the Great Exhibition of 1851, with which Henry Cole, the museum's first director, was involved in planning.

Construction took place between 1899 to 1909. Stylistically it is a strange hybrid, although much of the detail belongs to the Renaissance there are medieval influences at work.

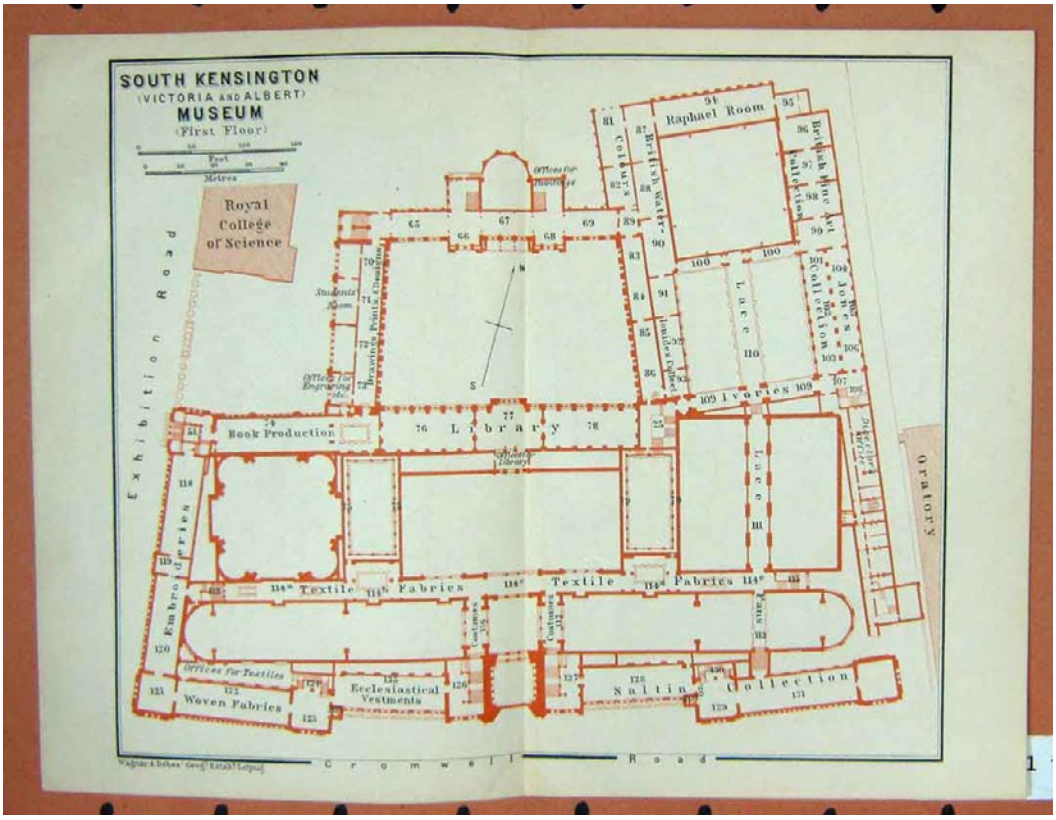
The main façade, built from red brick and Portland stone, stretches 220 m along Cromwell Gardens and was designed by Aston Webb after winning a competition in 1891 to extend the museum.

The interior makes much use of marble in the entrance hall and flanking staircases, although the galleries as originally designed were white with restrained classical detail and mouldings, very much in contrast to the elaborate decoration of the Victorian galleries, although much of this decoration was removed in the early 20th century



Victoria and Albert Museum, London.
Image source: http://bit.ly/ZBvD5G

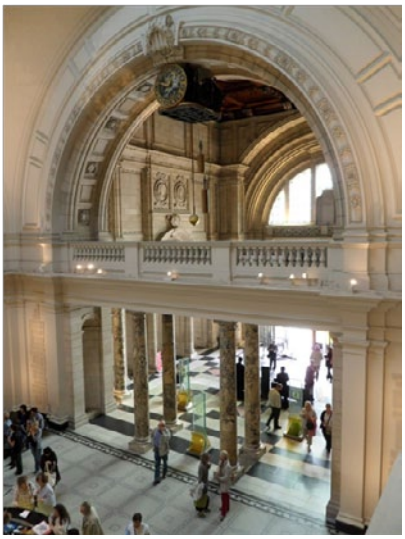
Design for the Victoria and Albert Museum: detail of the central portion of the main front to Cromwell Well.
Credit: RIBA Library Photographs Collection. Ref No: RIBA13238
Image source: http://bit.ly/12PHbA2



South Kensington Victoria Albert Museum Plan.
Image source: http://www.old-print.com/mas_assets/full/D3161955113.jpg

The main entrance consisting of a series of shallow arches supported by slender columns and niches with twin doors separated by pier is Roma Gothic Revival Wadsworth building of 1844, designed by the eminent architects Ithiel Town and Alexander Jackson Davis. It originally housed the art gallery Romanesque in form but Classical in detail

Shallow Arches.
Image source: http://bit.ly/W2tjN4



Main entrance interior.
Image source: http://bit.ly/RiYTZX

Exterior view.
Image source: http://bit.ly/Un7ZEP

The official opening by Queen Victoria was on 22 June 1857. In the following year, late night openings were introduced, made possible by the use of gas lighting.

gas light bulbs.
Image source: http://bit.ly/Un7Xww

Photograph of RAF staff using the South Court as a canteen
during the World War 2, 1940s. V&A Archive, MA/32/264, neg. A54
Source: http://media.vam.ac.uk/media/documents/The_V&A_during_wartime.pdf

The role of the Museum buildings themselves was forced to change. Between 1941 and 1944 galleries were used as a school for child-evacuees from Gibraltar. The South Court became a canteen for both the RAF and later for Bomb Damage Repair Squads despite official anxiety about potential damage to the rooms and their remaining contents.

Display and Lighting (Sculpture Hall)
Source: http://www.victorianlondon.org/entertainment/southkensingtonmuseum.htm

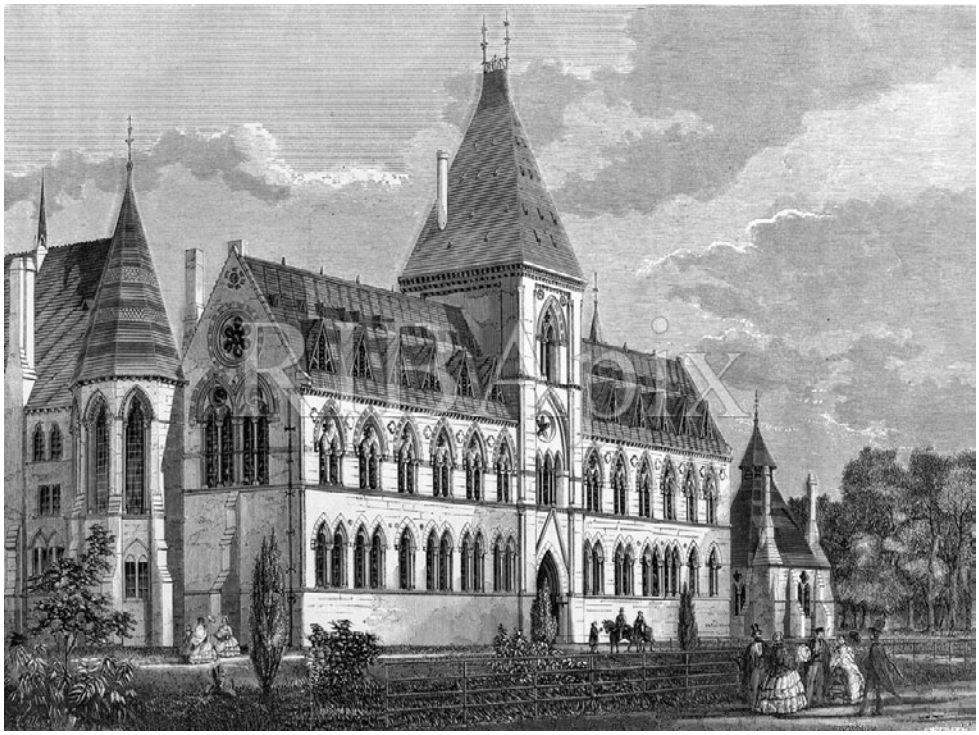
Victoria and Albert Museum. Interior view (South Court) showing display
Source: http://collections.vam.ac.uk/item/O1055805/london-victoria-and-albert-museum-photograph/

The Cast Courts are domainated by the two-part cast of Trajan's Column
Source: http://www.vam.ac.uk/content/articles/t/the-cast-courts/

University Museum, Oxford (1854 – 60)

Oxford University Museum of Natural History main facade.
Image source: http://www.artdaily.org/index.asp?int_sec=2&int_new=38123#.UNoJWeRtjLs

The building of the Oxford Museum was significant in the development of nineteenth century architecture, the history of Oxford University, and in the study of science in England. The result is as spectacular today as when it was first opened in 1860.



Oxford University Museum.
Credit: RIBA Library Photographs Collection. Ref No: RIBA16796
http://bit.ly/RirsH2
Image source: Building News, vol. 5, 1859 Sept. 9, p. 819

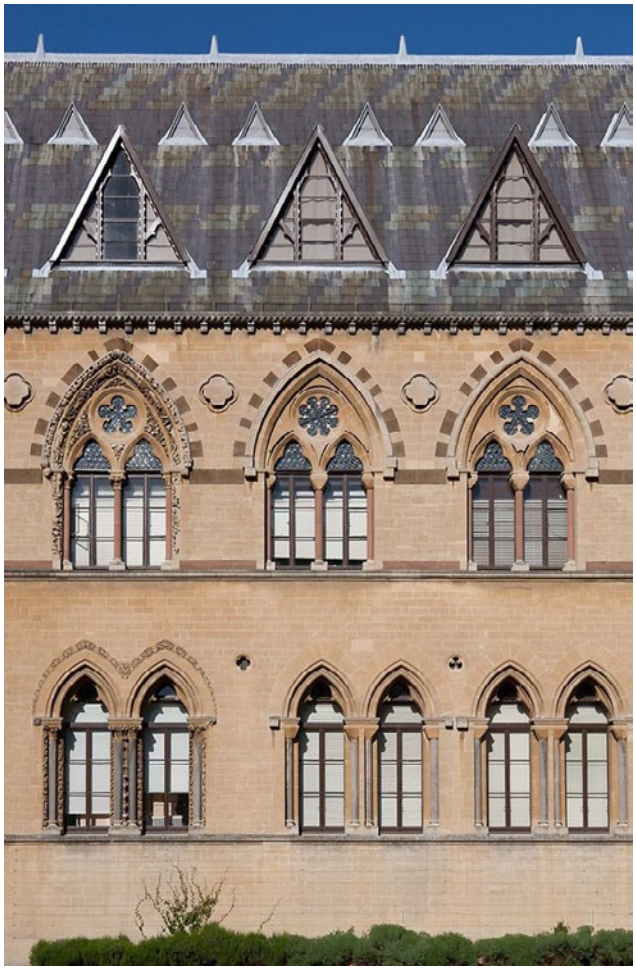
The Museum building is a striking example of Victorian neo-Gothic architecture. Its style was strongly influenced by the ideas of John Ruskin, who believed that architecture should be shaped by the energies of the natural world.

Oxford University Museum. Photograph 1977 by George P. Landow
Image Source: http://www.victorianweb.org/art/architecture/oxford/9b.html

Showed how Gothic Revival could be seriously employed for public buildings, the entrance block with its steep roof and central tower is reminiscent of Flemish town halls and its subtly asymmetrical window arrangement reflect the different sizes of the ground floor rooms.

Oxford University Museum, Parks Road, Oxford, seen from the south-west.
Credit: RIBA Library Photographs Collection. Ref No: RIBA42545
http://bit.ly/WGQtuP

The carving around the doors to the Museum remain unfinished.
Image source: http://bit.ly/WGSp6C



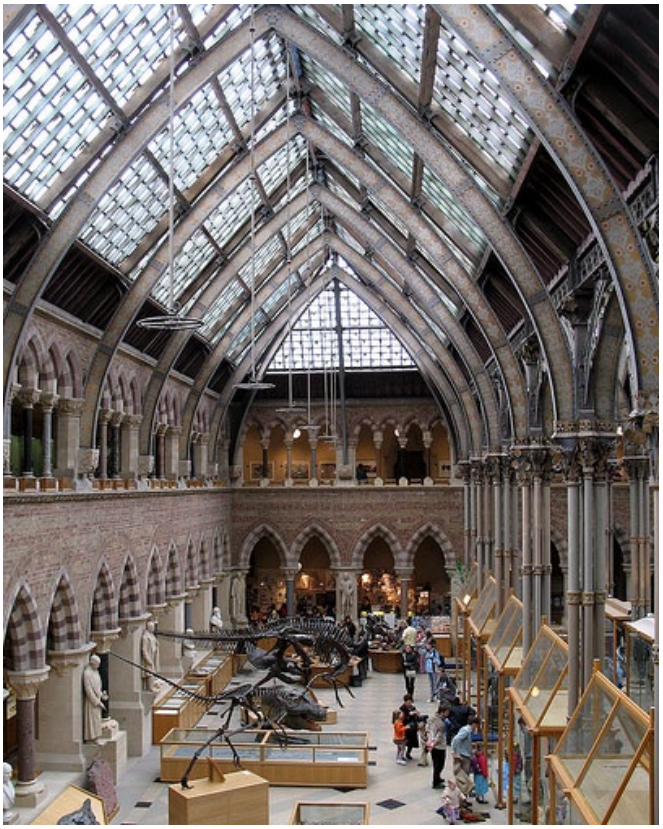
The cat window (1st floor further left), other windows carving remain unfinished.
Image source: http://bit.ly/WGSp6C

Internally there is a quadrangle with a steep glass roof supported by pointed iron arches, the spandrels of which are filled with delicate wrought iron foilage.

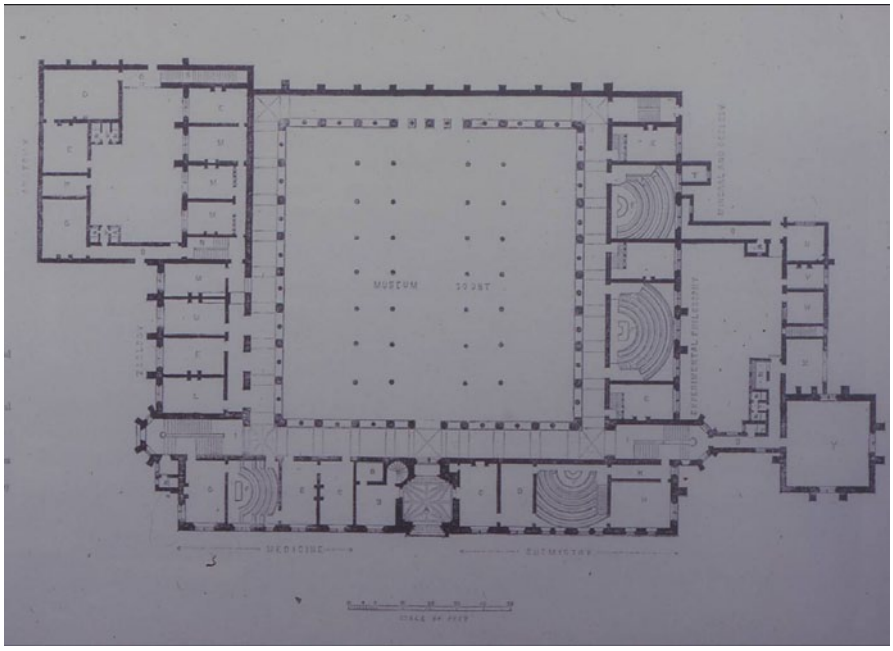
Oxford University Museum from inside.
Image source: http://www.flickr.com/photos/25831000@N08/3064513400/

The building is one of the finest examples of the Victorian Gothic style of architecture, exhibiting a wealth of naturalist carving; the huge glass roof over the central museum court is supported by cast iron columns, ornamented with wrought ironwork in the spandrels representing branches of species including sycamore, walnut and palm.

The cast iron columns supporting the glass roof in the court.
Image source: http://bit.ly/TjD0K2

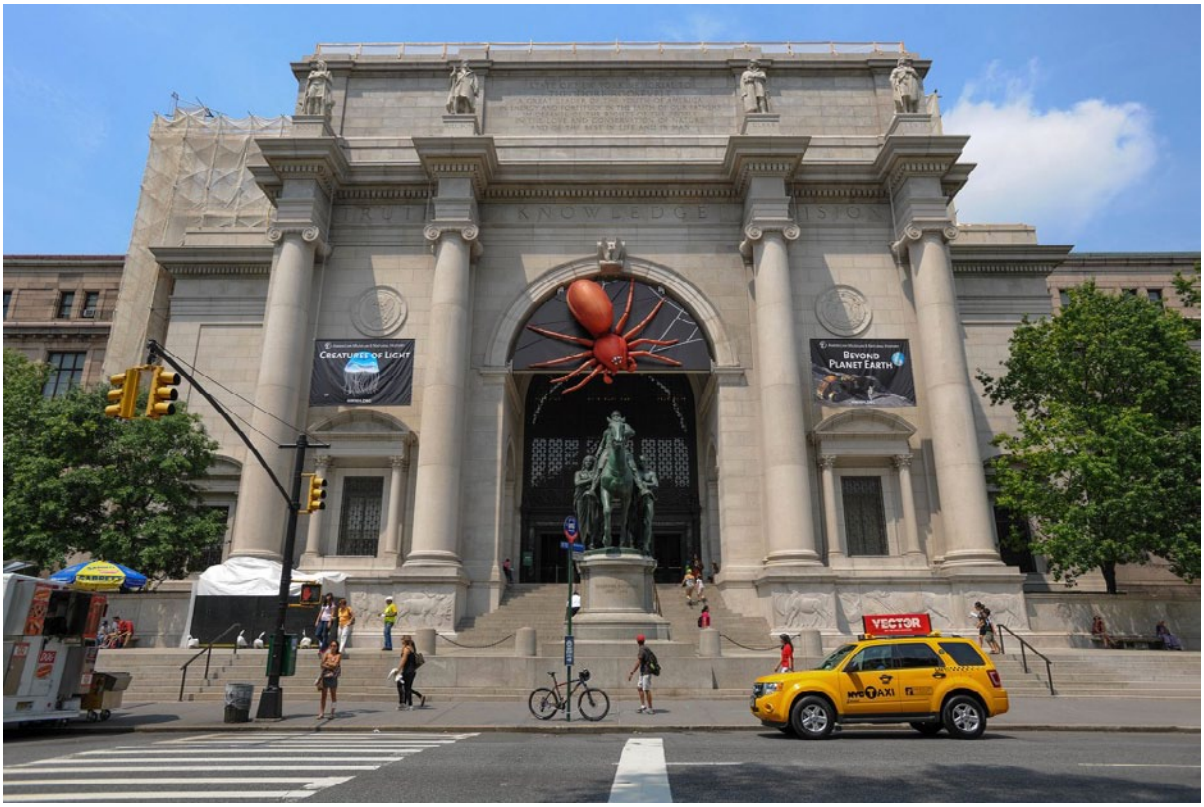


Oxford University Museum from inside.
Image source: http://bit.ly/V3RED5



Oxford University Museum plan.
Image source: http://bit.ly/V4NbR0

American Museum of Natural History, New York (1869)



neoRomanesque

State Historical Museum, Moscow, Russia (1875)

Main Building of State Historical Museum
Source: http://www.angelfire.com/pa/ImperialRussian/blog/index.blog?entry_id=1440248

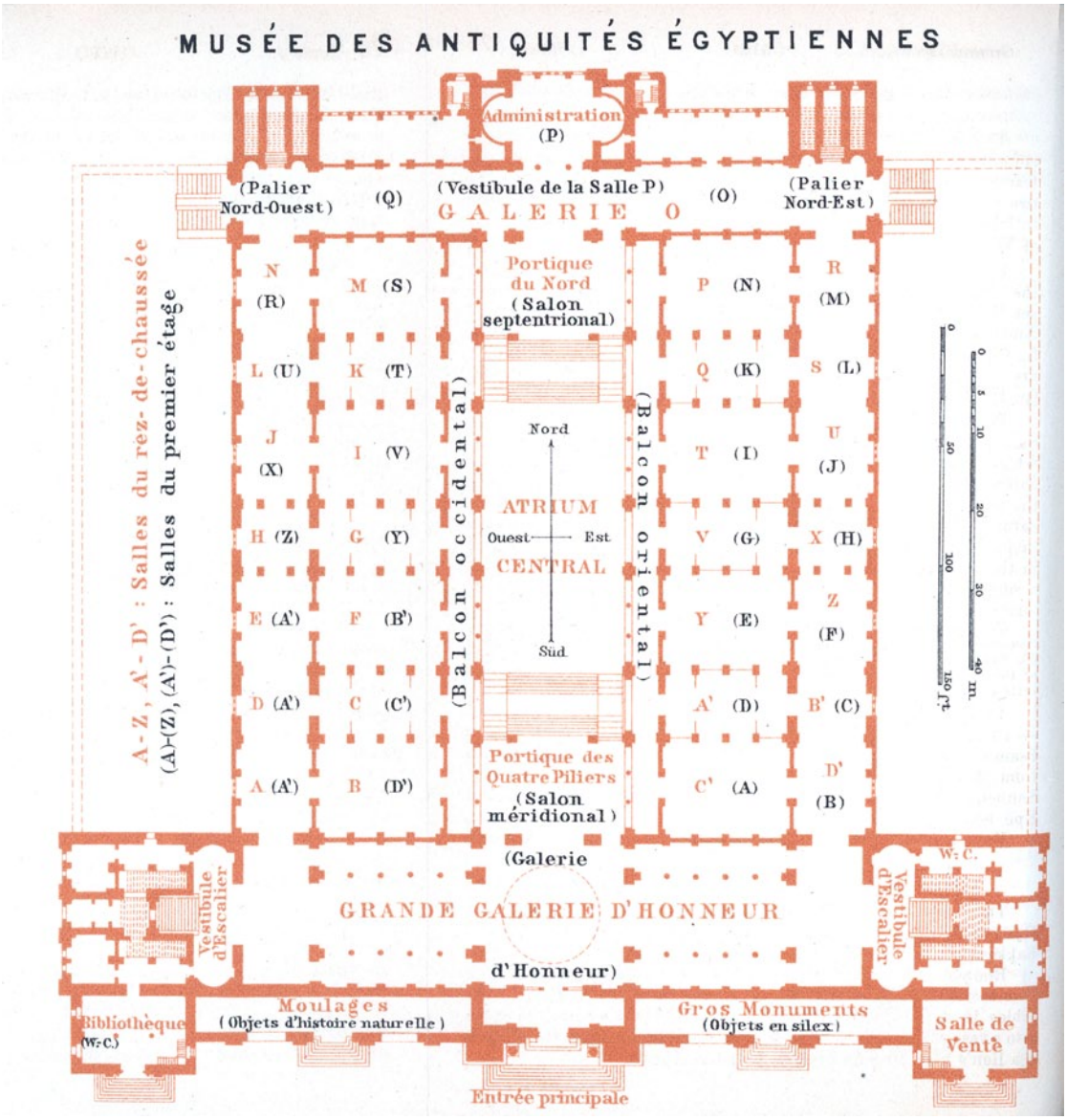
The Egyptian Museum, Cairo (1898 - 1902)

cairo museum
source: http://www.loc.gov/pictures/item/mpc2005003400/PP/

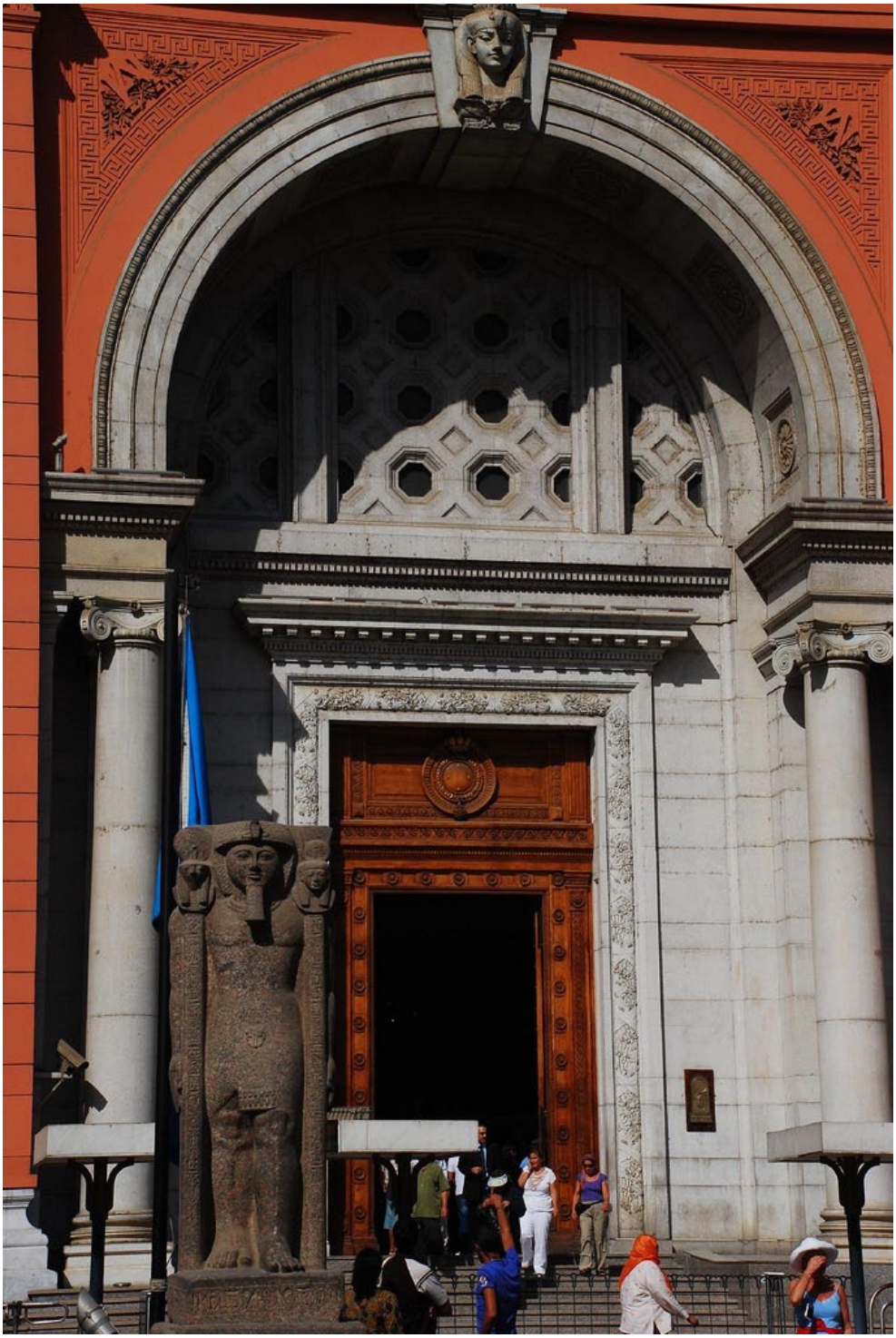
The architect of the Egyptian Museum, Marcel Dourgnon designed the exterior of the Egyptian Museum to reflect the Pharaonic, Greco-Roman, Coptic and Islamic phases of Egyptian history.

Source: http://www.corbisimages.com/stock-photo/rights-managed/YA008024/egyptian-museum-cairo

Marcel Dourgnon Museum of Egyptian Antiquities in Cairo , watercolor drawing of the main facade
source: http://archimedori.hypotheses.org/13



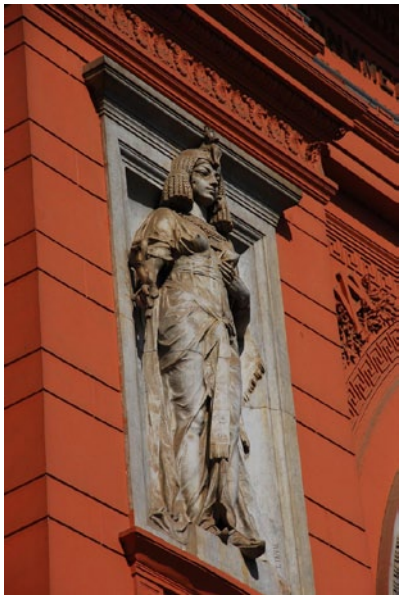
Ground floor plan
Source: http://dome.mit.edu/handle/1721.3/64000



Main Entrance
Source: http://www.flickr.com/photos/dslewis/5254556305/in/photostream/

In imitation of the ancient temples, the architect crafted the museum's entrance as a Pharaonic period pylon - a square façade with large gates; above the exterior doorways are Greek inscriptions and Greco-Roman style statues; the two pillars flanking the entrance, as well as the cornice above them, were inspired by Coptic art and the European traditions of Christianity; finally, the large dome attached to the roof, 34 metres in height, was made in the Islamic style.

Main Entrance
Source: http://www.bestourism.com/medias/dfp/7393



Source: http://www.flickr.com/photos/dslewis/5255168470/in/photostream/

Source: http://bit.ly/XJzkRA

Source: http://bit.ly/VwP4rE

Natural light
The Egyptian Museum. Interior of main hall, looking down from first floor
Source: http://www.loc.gov/pictures/item/mpc2004005088/PP/resource/

inside the Egyptian museum
Source: http://www.loc.gov/pictures/item/mpc2004000177/PP/

using artificial light
Source: http://bit.ly/10EMRzw

Museum of Islamic Art, Cairo (1899 - 1903)

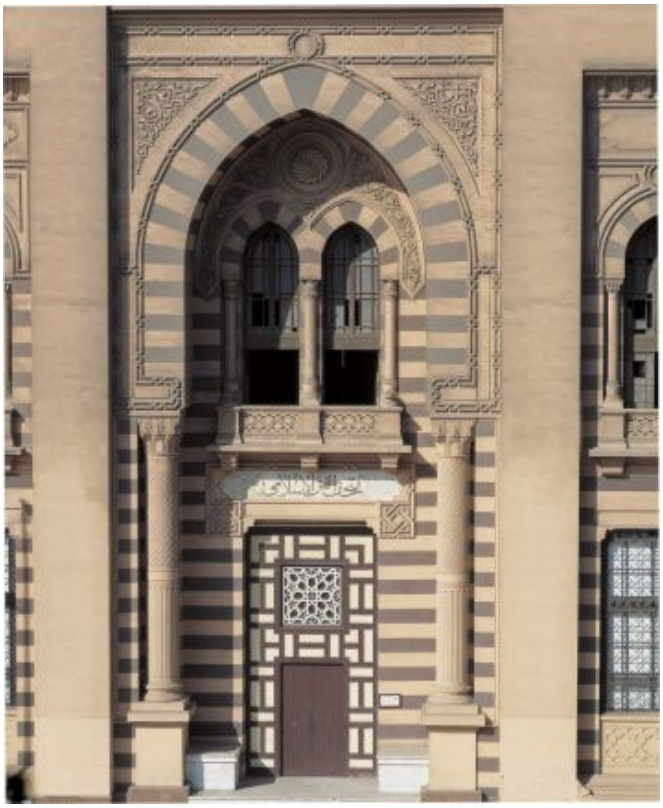
Museum of Arab Art & Library Khedivial, Cairo 1903.
Credit: Memory of Modern Egypt.
Image source: http://modernegypt.bibalex.org

The building was designed by Alfonso Manescalo, and was completed in 1902 in Neo-Mamluk style,

Museum of Islamic Art. Exterior facade.
Image source: http://bit.ly/YLrSEG

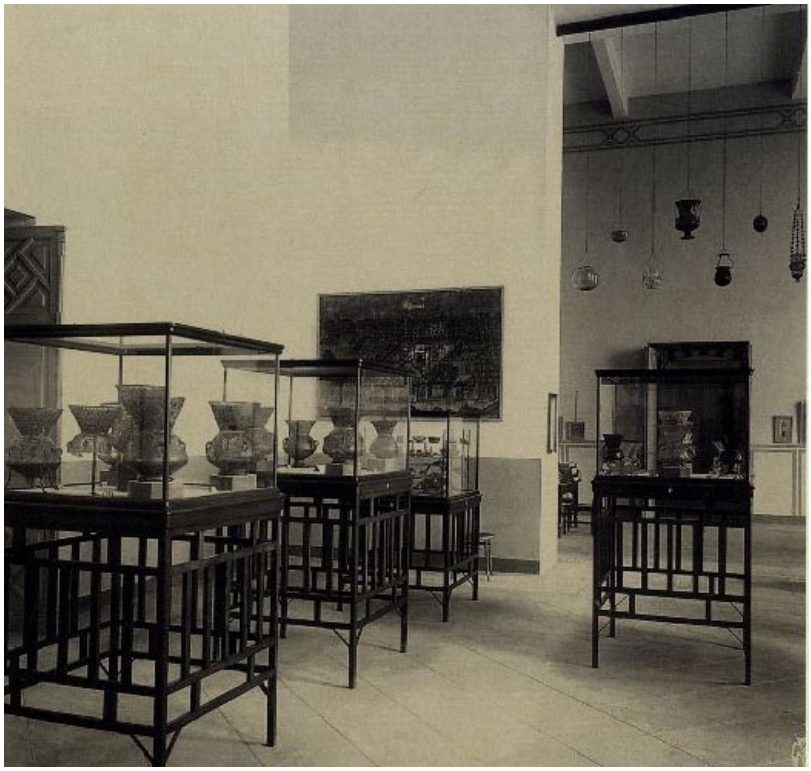
Museum of Islamic Art plan.
Credit: Memory of Modern Egypt.
Image source: http://modernegypt.bibalex.org

The entrance on Port Said Street features a very luxurious facade, rich with decorations and recesses inspired by Islamic architecture in Egypt from various periods.



Museum of Islamic Art. Main Entrance.
Image source: http://bit.ly/YLrSEG

Museum of Islamic Art. Main Entrance.
Image source: http://bit.ly/Vh7YRr



Displaying using natural lighting. ca (1930 - 1950)
Credit: Memory of Modern Egypt.
Images source: http://modernegypt.bibalex.org

Displaying using natural lighting. ca (1903 - 1950)
Credit: Memory of Modern Egypt.
Image source: http://modernegypt.bibalex.org

Displaying using artificial lighting. 2010
Image source: http://www.bbc.co.uk/news/world-middle-east-11622974

20th Century Museums & Byeond

After 1900 artistic innovation in Europe and the US increased in a rapid succession of movements

Modernism
The modern movement lasted through the first half of the 20 th Century.
Modernism rejects old, traditional ideas and styles in art and design Although Modernist styles are diverse, art moved toward abstraction based on line, color, shape, space, and texture Modern architecture and design moved toward abstraction and rejected historical styles and ornamentation Modern architecture reveals rather than conceals the inner structure of the building.

Art Nouveau
Art Nouveau began in France (Late 19 th Century – Early 20 th Century) Art Nouveau incorporates Organic and Natural Forms into the decoration Architecture +Interior Design, Fashion, Graphic Arts, Decorative Arts.

Art Deco
Movement in 1920's and 1930's associated with "the Jazz Age" Began in France , but spread to other parts of Europe, USA, and around the world People still wanted decoration despite the de Stijl and other modern movements eliminating all unnecessary decoration Industrial Design Combined with Fine Art Elements (industrial materials (metal) and objects + patterns and repeated shapes) Industrial Design – cars, household appliances, fashion, decorative objects, architecture Inspiration from Ancient Cultures, including Egypt.

De Stijl (The Style)
Began in 1917 by a group of artists in Holland " balance between individual and universal values" Integration of Art and Life Geometric Forms / "Purity" and Simplicity

Prairie Style
American Midwest Architect Frank Lloyd Wright invented the Prairie Style in early 20 th Century Related to The Arts and Crafts Movement , using craft, including stained glass windows, ceramics, and wood carpentry Wright preferred the countryside to the city Natural Materials / Natural Environment Inspired by Japanese Architecture (long, low buildings with open interior spaces). Wright designed a hotel in Tokyo (now demolished)

Bauhaus
The Bauhaus was an important art and design school in Germany opened in the 1920's The Bauhaus focused on understanding Pure Form (color, shape, line, composition, space, etc,) Many important artists and designers taught and studied there The Bauhaus trained artists, designers, and architects to accept and anticipate the needs of the 20 th Century The Bauhaus greatly influenced modern design – "streamlined" the look of architecture and

design, including typography The Bauhaus was closed by the Nazis in 1933
The Bauhaus Bauhaus designers invented new simplified forms of typography (sans serif)
The Bauhaus designers created “streamlined” design with simple, “clean lines”

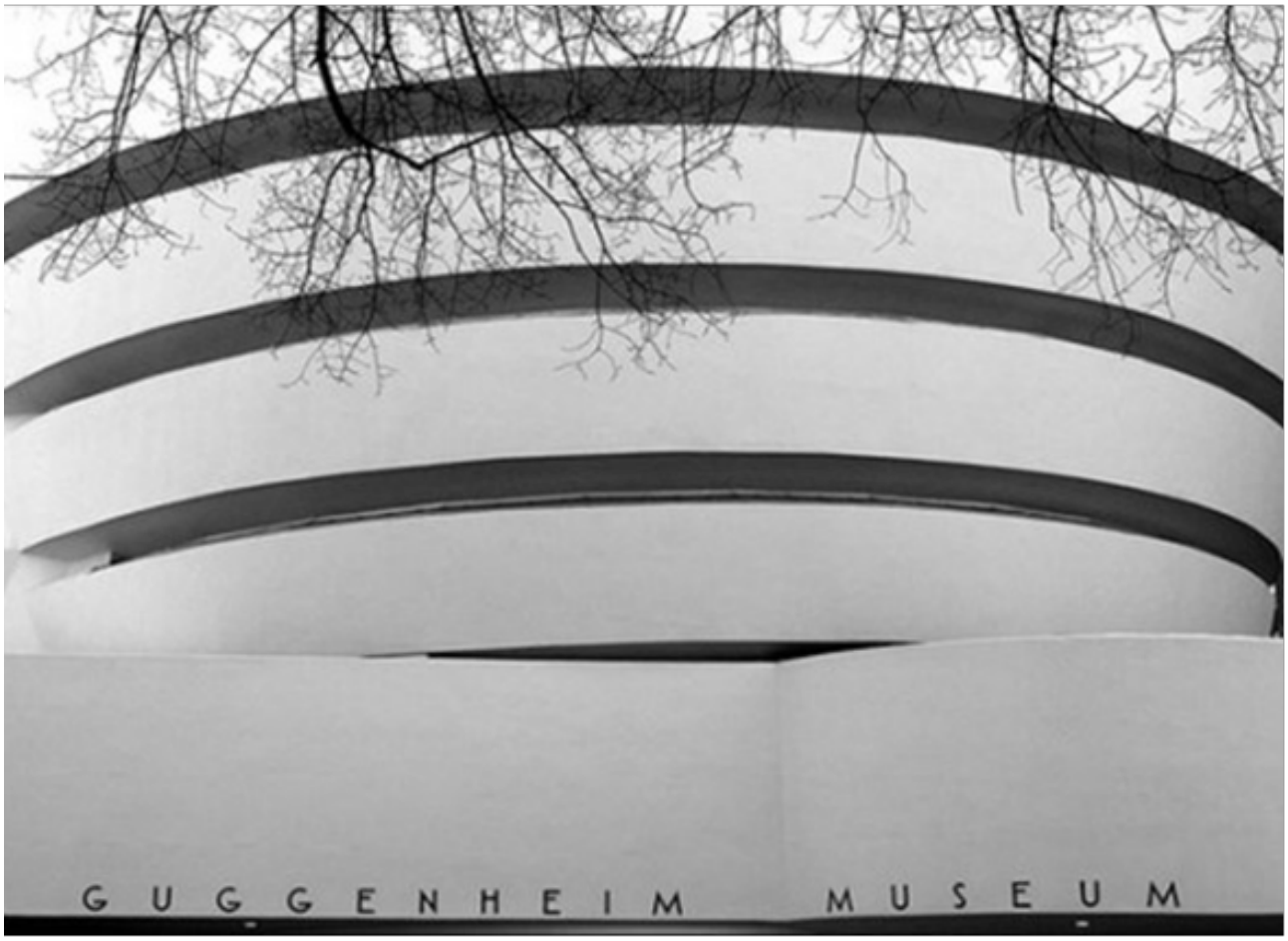
Mid-Century Modern
Late 1940’s, 1950’s, into the Early 1960’s
-Organic Forms vs. Geometric Forms
-Fusion of Architecture and Sculpture
-Simplicity
-New Industrial Materials

Post-Modern Architecture

The Past 20 – 30 Years
- Belief that Early Modernist Architecture was impersonal and sterile
- Complex and Eclectic structures
- Post-Modern architecture accepts and embraces the “messy and chaotic” nature of urban life
- References to architecture from the past

Solomon R. Guggenheim Museum, New York, USA (1943-1959)

Frank Lloyd Wright



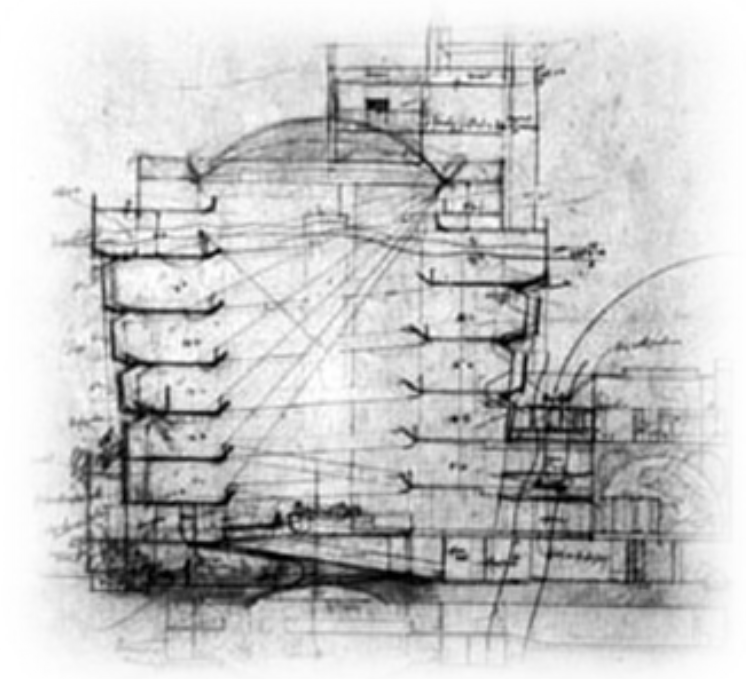
Swelling out towards the city of Manhattan, the Solomon R. Guggenheim Museum was the last major project designed and built by Frank Lloyd Wright between 1943 until it opened to the public in 1959, six months after his death, making it one of his longest works in creation along with one of his most popular projects. Completely contrasting the strict Manhattan city grid, the organic curves of the museum are a familiar landmark for both art lovers, visitors, and pedestrians alike.

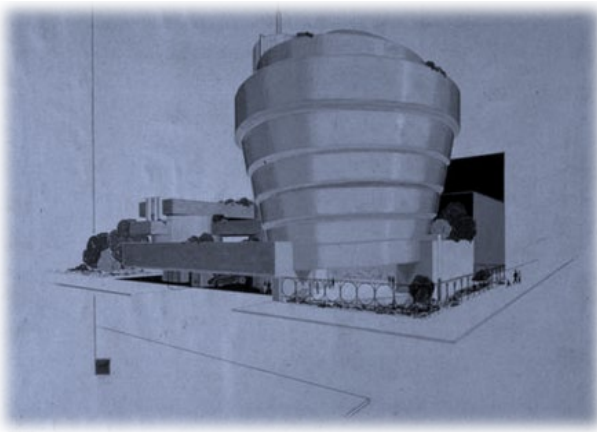
Aerial view of Solomon R. Guggenheim Museum with Central Park. Photo: David Heald

The exterior of the Guggenheim Museum is a stacked white cylinder of reinfored concrete swirling towards the sky. The museum's dramatic curves of the exterior, however, had an even more stunning effect on the interior. Inside Wright proposed "one great space on a continuous floor," and his concept was a success.

Solomon R. Guggenheim Museum, New York (1943-1959)

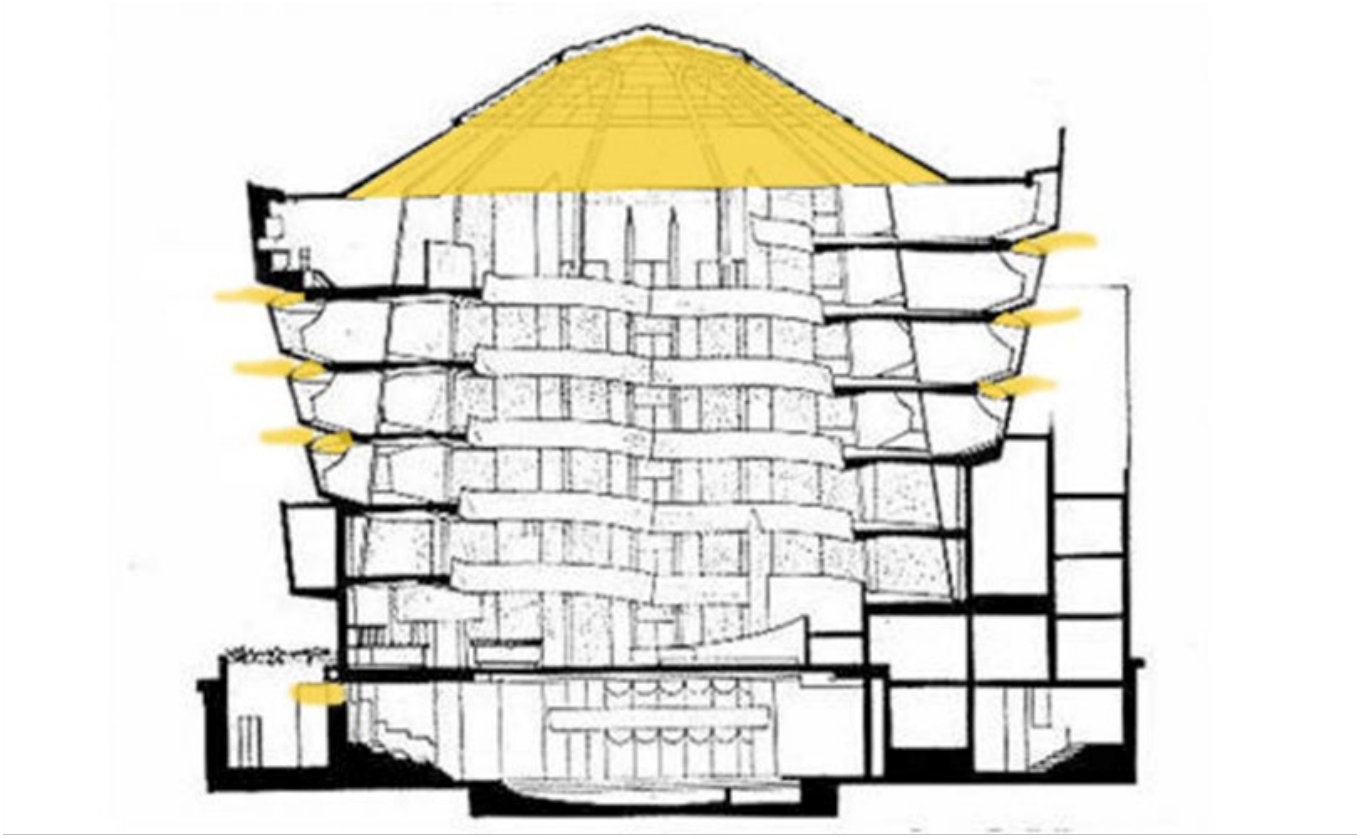
Walking inside, a visitor's first intake is a huge atrium, rising 92 in height to an expansive glass dome.Along the sides of this atrium is a continuous ramp uncoiling upwards six stories for more thanone-quarter of a mile, allowing for one floor to flow into another. The ramp also creates a procession in which a visitor experiences the displayed along the walls as they climb upwards towards the sky .





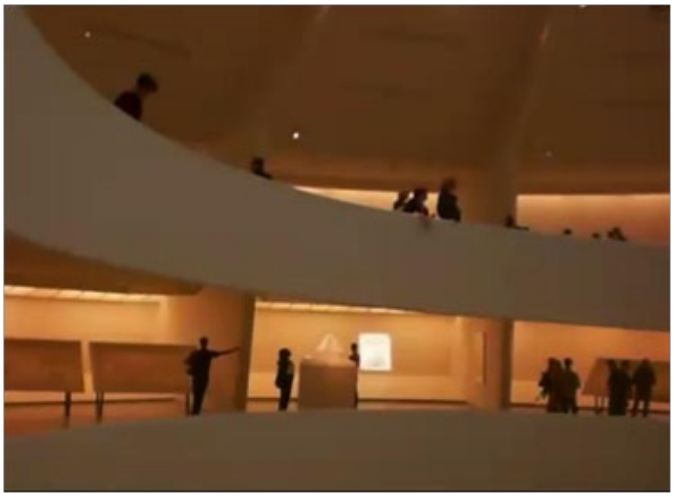
sketches

Solomon R. Guggenheim Museum, New York (1943-1959)



Top Lighting

artifical lighting
Source: greatbuildings.com



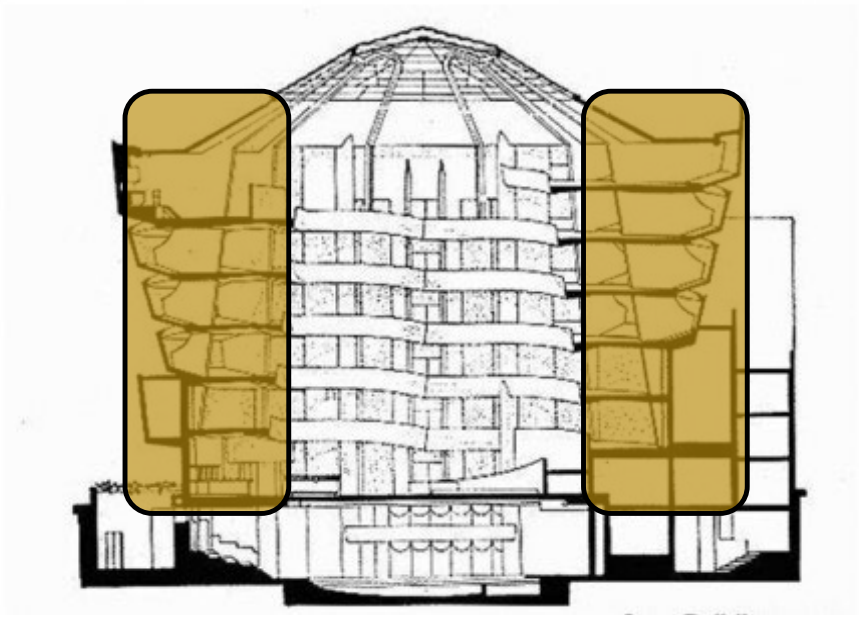
artifical lighting
Source: greatbuildings.com

Using neutral colors so as not to over whelm the exhibits

Source: greatbuildings.com

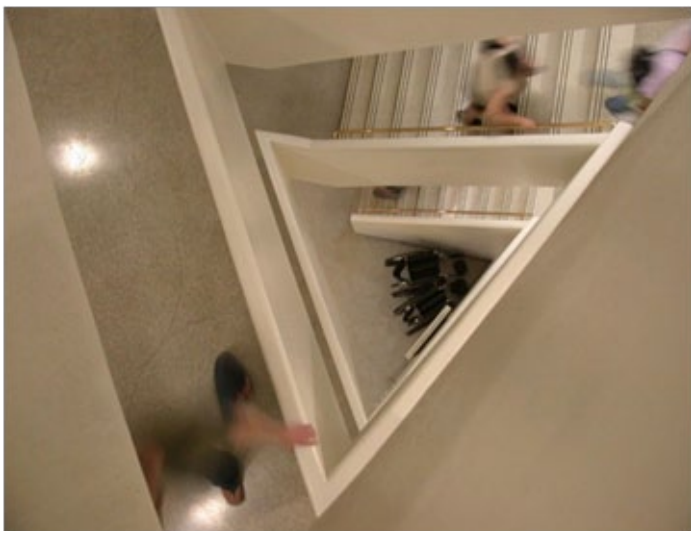
Source: greatbuildings.com

The design of the museum as one continuous floor with the levels of ramps overlooking the open atrium also allowed for the interaction of people on different levels, enhancing the design in section.

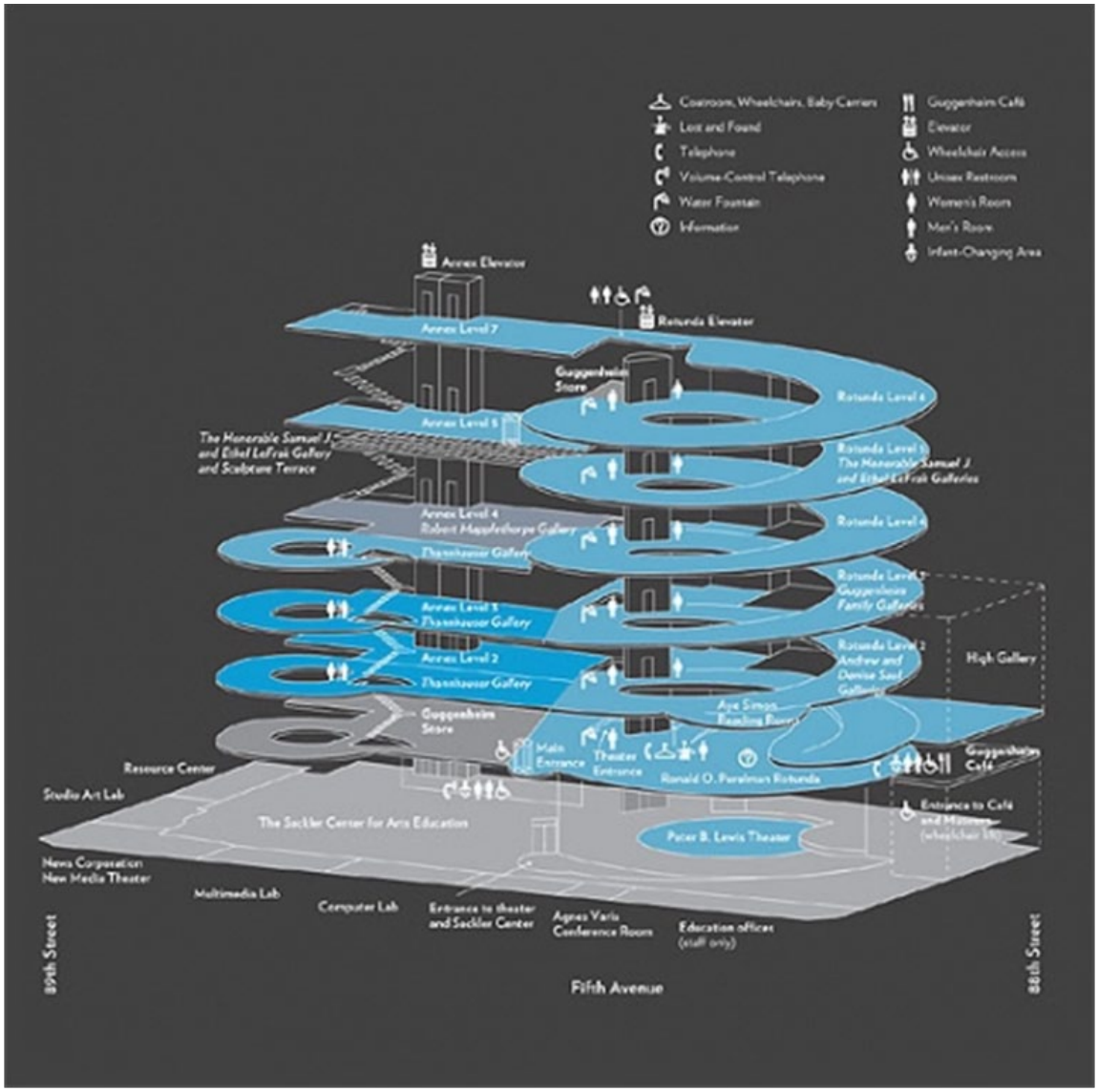


Source: greatbuildings.com

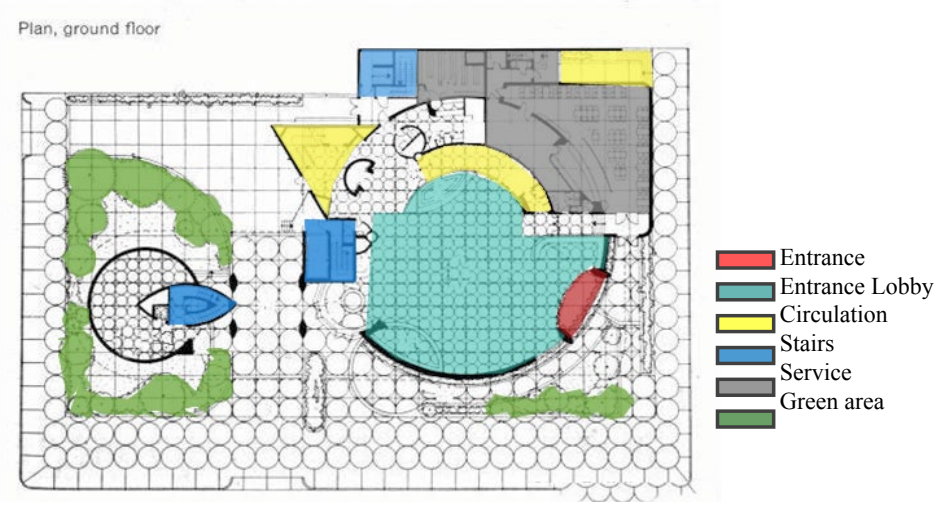
Wright whisked people to the top of the building via elevator, and led them downward at a leisurely pace on the gentle slope of a continuous ramp.



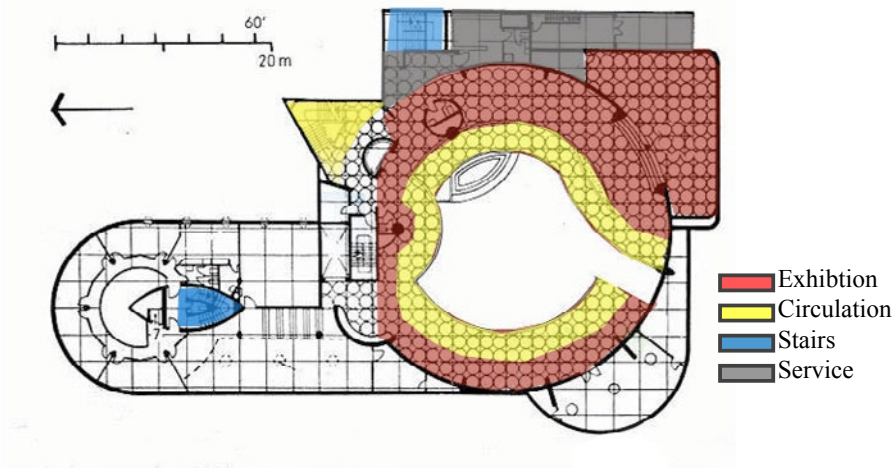
Source: greatbuildings.com



Solomon R. Guggenheim Museum floor plan.
Vasily Kandinsky.Composition 8 (Komposition 8), July 1923. Oil on canvas, 140 x 201 cm. Solomon R. Guggenheim Museum, New York, Solomon R. Guggenheim Founding Collection, By gift 37.262. © 2009 Artists Rights Society (ARS), New York/ADAGP, Paris

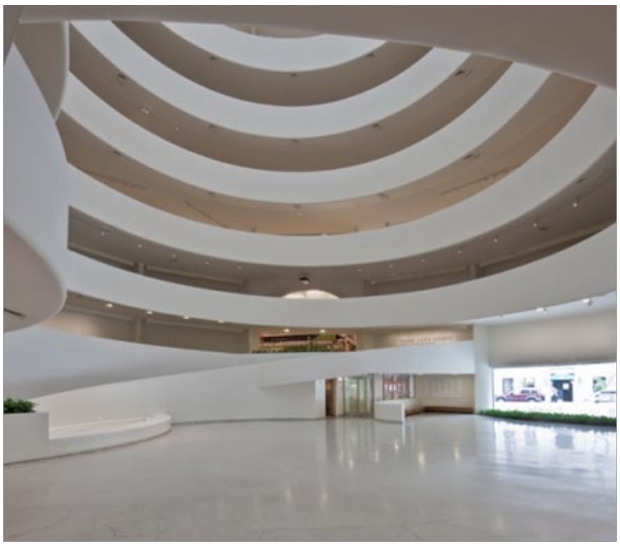


Ground floor plan



First floor plan

The curved walls of the interior were intended so that paintings had to be tilted backward, “as on the artist’s easel.” This was unsuccessful because the paintings were still very difficult to display because of the concavity of the walls, and because of this before its opening 21 artists signed a letter protesting about their display of work in such a space .

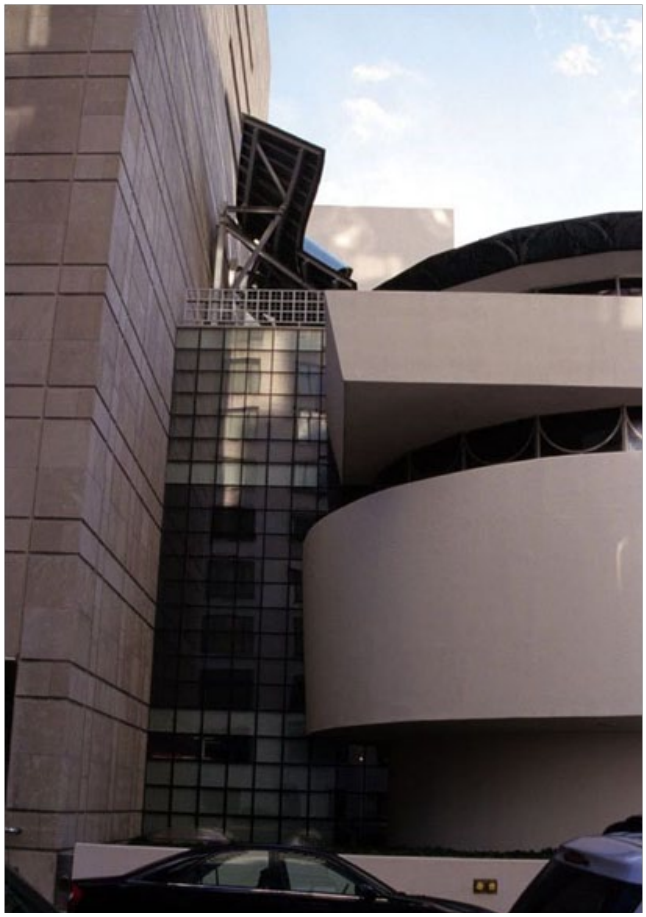


October, 1959. Photo: Robert Mates

a problem which Museum Director James Johnson Sweeney took seriously, stating, “This is the most spectacular museum interior architecturally in this country"

October, 1959. Photo: Robert Mates

Between 2005-2008 the Guggenheim Museum went under an exterior renovation where eleven coats of paint were removed from the original surface and revealed many cracks due to climatic reasons.This revelation led to extensive research in the testing of potential repair materials, as well as the restoration of the exterior.



Material of Exterior: Concrete , Glass and steel.
Source: greatbuildings.com

the glass dome

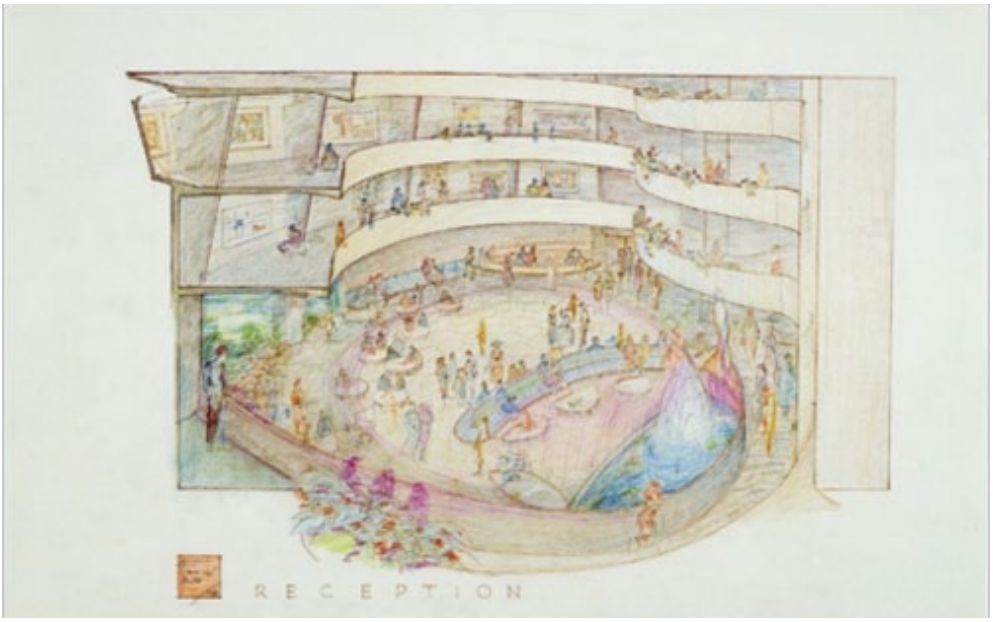
Wright also had a problem with Manhattan's building-code administrators who argued with him over structural issues, such as the glass dome that had to be reduced in size and redesigned to include concrete ribs that are extensions of the discreet structural pillars on the exterior walls

EXHIBITION OVERVIEW
presents a new reading of the impact of photography of the past fifty years. Much of the work has been created in the 21st century and incorporates technologies of recording—still and moving images, audio, and performance—that suggest a reinterpretation of postwar art in which the events of the past are recognized as inhabiting even the most forward-looking ideas.

Source: http://www.guggenheim.org/images/content/arts_curriculum/assets/EDU.Haunted.pdf

Source: greatbuildings.com

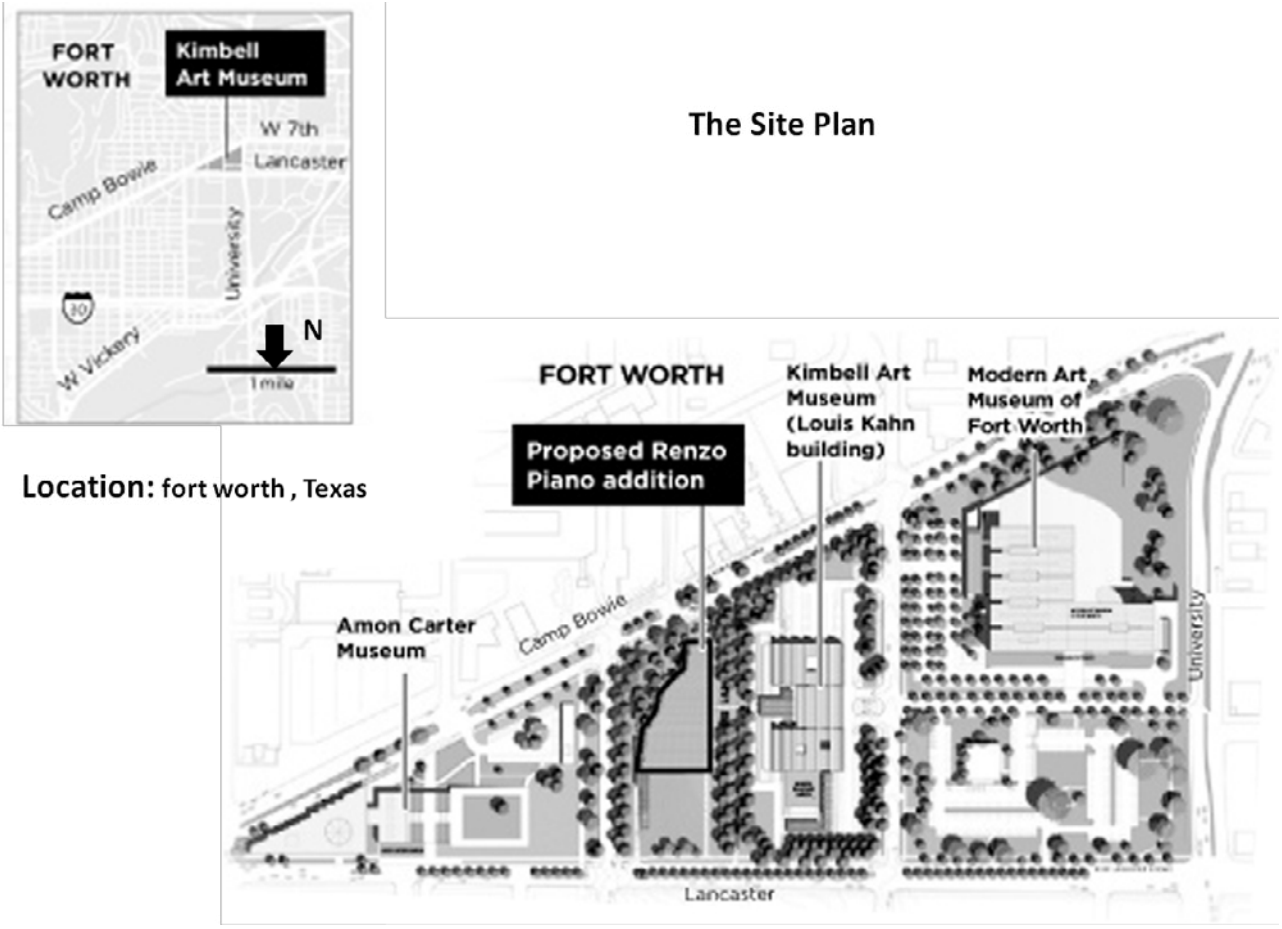
Solomon R. Guggenheim Museum, New York (1943-1959)



Frank Lloyd Wright, Solomon R. Guggenheim Museum, New York, 1943–59.Perspective, "The Reception," Graphite pencil and colored pencil on paper, 29 1/8 x 38 3/4 inches.The Frank Lloyd Wright Foundation FLLW FDN # 4305.092. © 2009 The Frank Lloyd Wright Foundation, Scottsdale, Arizona

Source: greatbuildings.com

Kimbell Art Museum, Texas, USA (1969-1972)



Introduction

Multimillionaire Kay Kimbell wanted to create a public place appropriate for his art collection, primarily consisting of paintings of the seventeenth and eighteenth century.

Opening its doors to the public in 1972 marked a new milestone in the work of Louis I. Kahn and introduced a new institution with a considerable presence in Texas and in the art world in general.

"The space of a building must be able to read a line of lighted spaces. Each space should be defined by its structure and the nature of its natural lighting. Even a space designed to remain in the dark should be light enough, from any mysterious opening, which shows us how dark it is in reality "(Louis Kahn)

The Kimbell Art Museum is Kahn's final work which he saw the completion of.

Since its inauguration, the Kimbell Art Museum has gained recognition, for the most part by the notoriety of the building, modern classic, the American architect Louis I. Kahn.

History

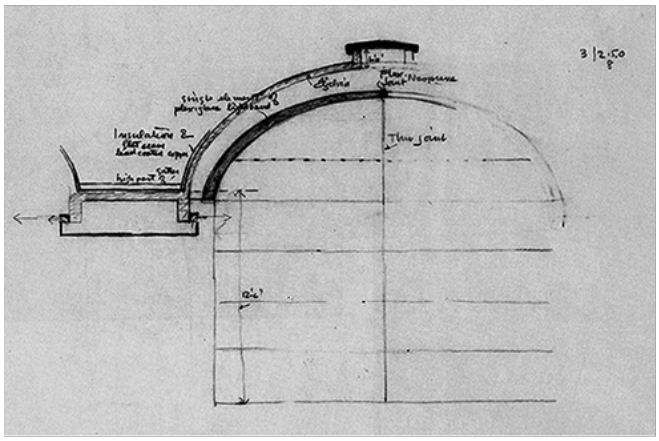
Kay Kimbell and his wife, who gave name to the museum, established a foundation to build an art museum to house his growing collection. The board of directors of the Kimbell Art Foundation, created in 1936, hired Richard B. Brown as director of the museum in 1965 for the realization of the vision and program design of the institution, as well as to increase its collection. Brown chose Kahn for the job, but demanded by contract to work with the local study Preston Geren M & Associates.

As with many institutions that built its first building, the program took into account the

future objectives of the museum, assigning a large space to the growing collection of art, thus giving visibility to the institution and become one of the main attractions of the city.
Kahn, who is never satisfied with easy solutions, took three years to produce four design proposals for the museum. The common element in all of its proposals was the use of decks / cycloid horizontal roofs.
Situation
Located in the middle of a park, the site of 3.8 hectares keystone of the museum is located next to other prominent museums, notably the Amon Carter Museum, designed by Philip Johnson and opened in 1961.
Its address is 3333 Camp Bowie Boulevard in the heart of the cultural district of Fort Worth, Texas, USA.

Concept
As in most of its buildings Kahn managed to develop features that contextualize and give a unique personality to the project. A good example of this are those covered roofs, which make a fine partnership between the structure and what was once the rural setting of Fort Worth.
In particular, far away in another time and visible from the site, there was a grain silo, then demolished. Ideologically, we can see and understand better than the overall shape of a grain silo, which consists of a series of vaulted forms separated by a flat surface, which has been conceptually deprived of their vertical and horizontal has been prepared in the landscape can into the structure of the configuration of the roof-deck.
These forms cycloid, and are willing vertically or horizontally, are precisely the elements that characterize and contextualize the Kimbell Art Museum in the Texan landscape to which it belongs.

Union of bending to allow the passage of natural light

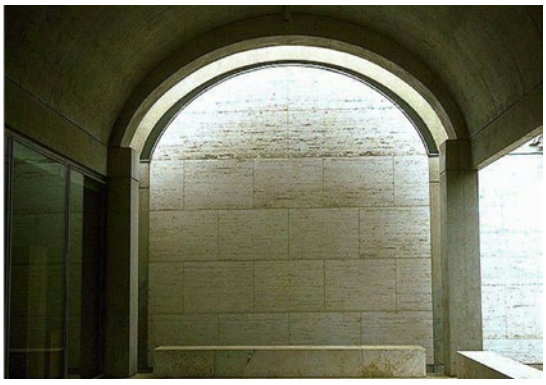


The masterful use of natural light in the Kimbell Art Museum was based on collaboration between Louis Kahn and Richard Kelly. Kahn who designed a series of galleries oriented north to south with vaulted ceilings, which have a central slit of light. Kelly designed the system of directional light through a sheet of aluminum dome.

Through the drill penetrates the daylight, in order to soften the contrast between the reflector and the cement vaulting. It was left without perforating the central part of the aluminum foil, to block the direct daylight. In areas that did not require protection against ultraviolet radiation, such as the lobby or the restaurant, used a reflector fully perforated.

To calculate the contour of the reflector and the properties of light were used and predictable software. At the bottom of the steering system of daylight were integrated electrified rails and projectors.

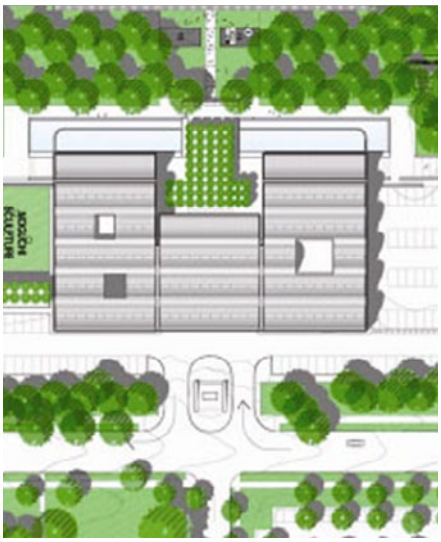
For patios, Kelly proposed plants in order to soften the light they project to the interior spaces



Cieling

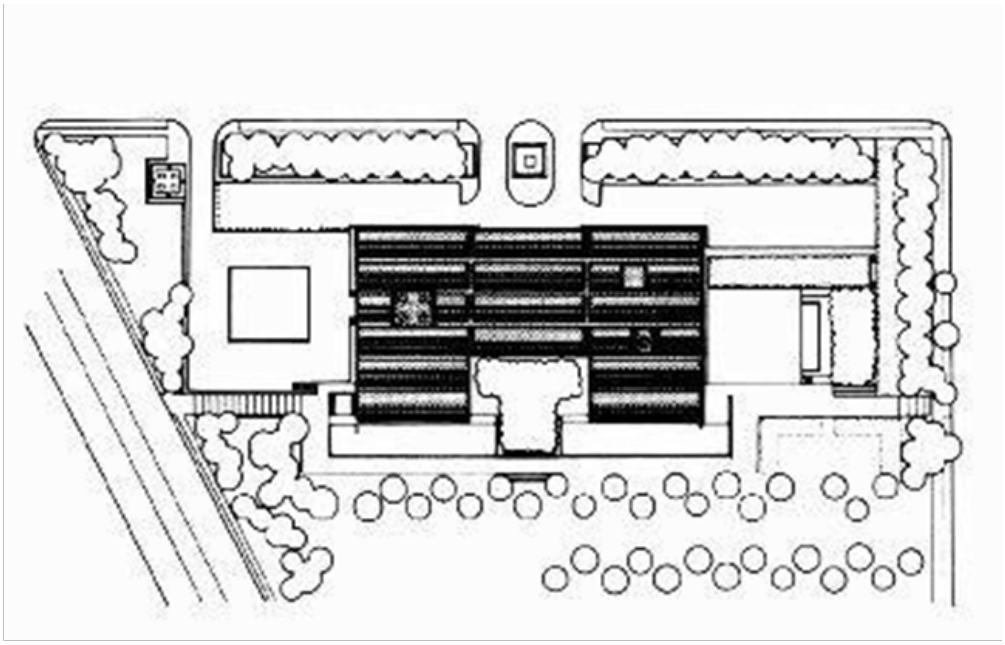
Vaults

The construction of the most famous American architect Louis Kahn was the Kimbell Art Museum, consisting of six parallel and great vaults of concrete, like the ceiling, with lights on the ceiling all along its length to create intimate spaces and monumental at the same time, contemporary in its nakedness and intemporal in their references to classical Roman architecture.

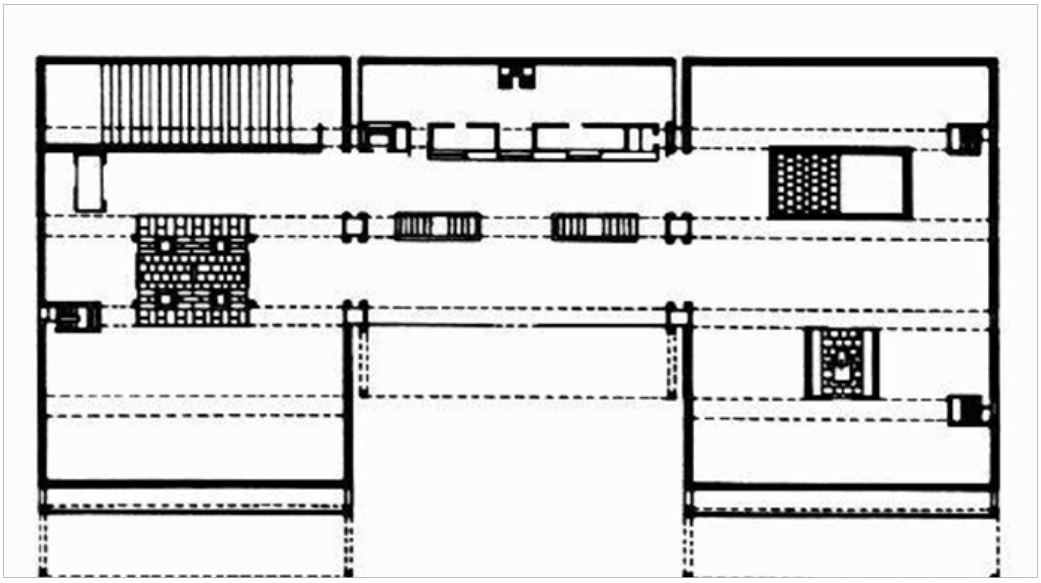


Design

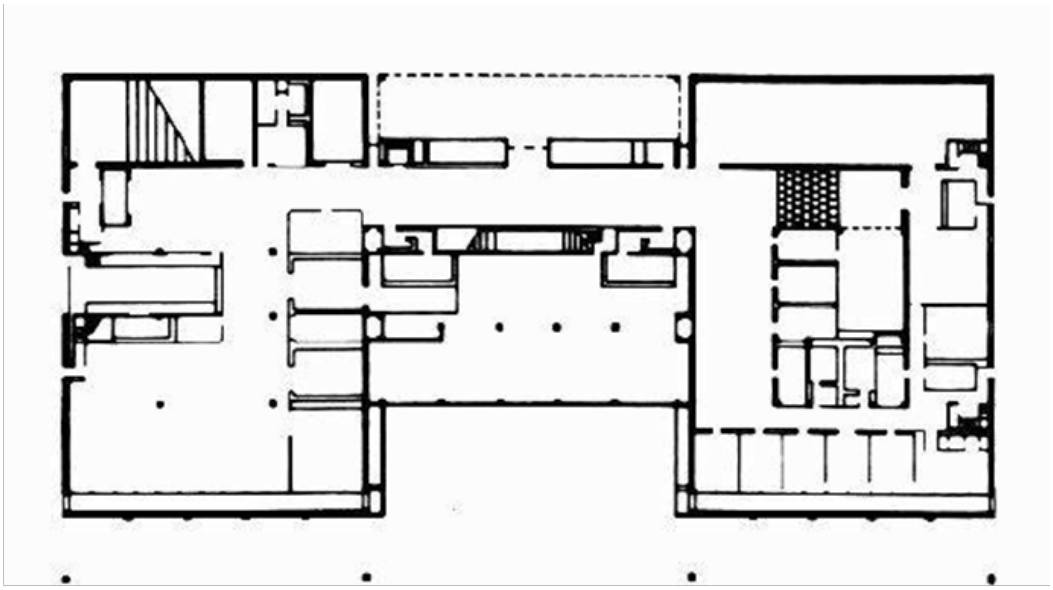
The design of the Kimbell Museum of Fine Arts, built between 1967 and 1972, offers its linearity in the will of contact with the exterior: the natural light and its treatment are the essential argument of the building, which is experiencing Kahn reflex zenith on curved surfaces.



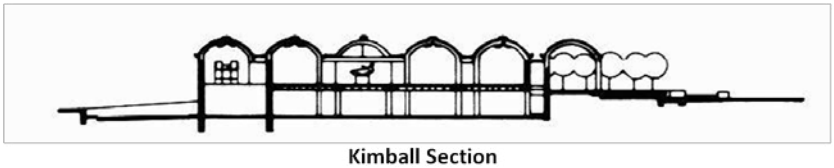
Site



Ground Plan.

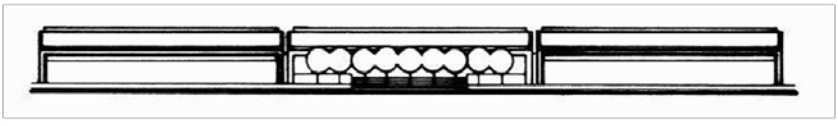


First floor Plan.



Kimball Section

Kimball North Elevation



Kimball West Elevation

Spaces

In addition to the galleries for exhibitions, installations include the museum's library, an auditorium with capacity for 180 spectators, an art library, a laboratory for conservation of works of art and a restaurant.

The spaces of the galleries do not delineates each individual vault shape but is flowing from one to another as a result of the liberation of space achieved with the removal of walls.

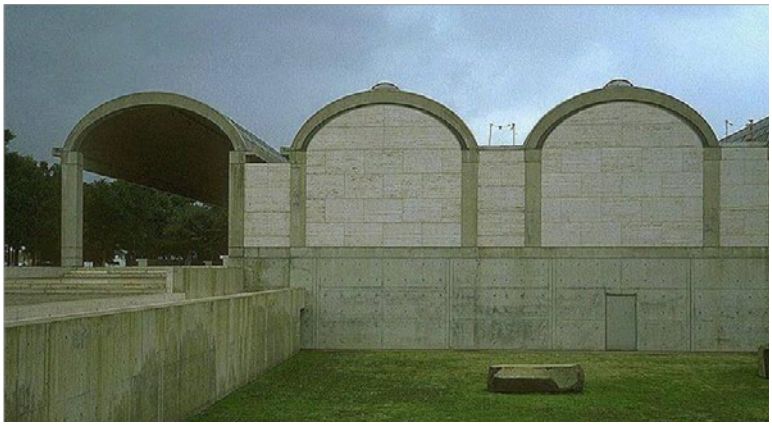
Although the creation of a space within, through the light, is achieved by the particularity of the roof to beam the light. This peculiarity has become the most popular of Kahn, distributors of natural light through a small slot into the sky and along the concrete vault.

Inside the galleries the architect included three yards, created from the vaults of the court in certain locations, which bring light and a piece of the outside world to the most "interior" of the galleries.

The museum is surrounded by a forest and a pond that add a suitable environment to the whole ambience of the place.

Structure
A simple composition of concrete vaults parallel, is revealed to the visitor before stepping inside the building, with porches, which seem to be an unnecessary continuation of the construction.
The porches unnecessary, according to Kahn's own words, define the vocabulary of the entire structural museum: basically a beam of concrete 2.54 x0, 58 meters, horizontal and supported on four square columns, which rely on the decks in the form of cycloidal vaults that meet the mission-covered roofs, and whose structure is used, as in most of the buildings Kahn, in order to create an abstract order, a genesis for the creation of more complex.
The space resulting from the union between the curvature of the roof and wall form a crossbar, which allows oblique rays of light in the rooms. These rhythmic forms of roof, which can be seen in two of the four facades of the building, provide a vivid visual impression when climbing the ramp that leads staggered to the main entrance of the museum.

Materials
The symmetry of design is enhanced by the use of natural materials like travertine and white oak, combined with glass, concrete, stainless steel and aluminum.
The narrow skylights that are along the vaults are on the inside of aluminum reflectors, while the galleries provide a diffuse natural light
To express the differences and the inherent qualities of materials, the arc of the roof-deck concrete is separated radially from the curve of the adjacent wall covered with travertine.



Entrance View.

West Elevation.

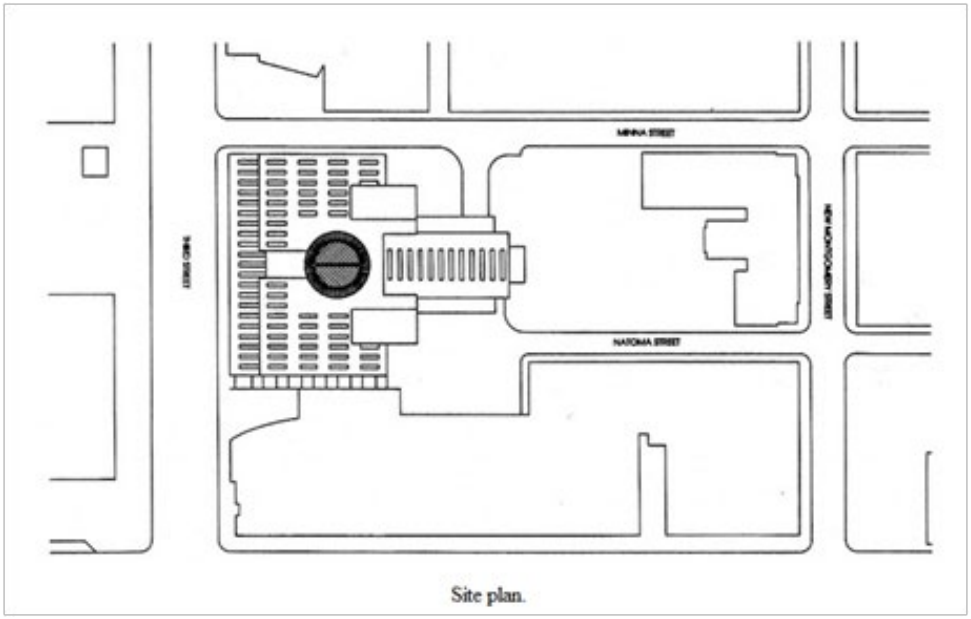
San Francisco Museum of Modern Art, California, USA (1992-1995)

Architect: Mario Botta
Structure: steel frame, brick cladding

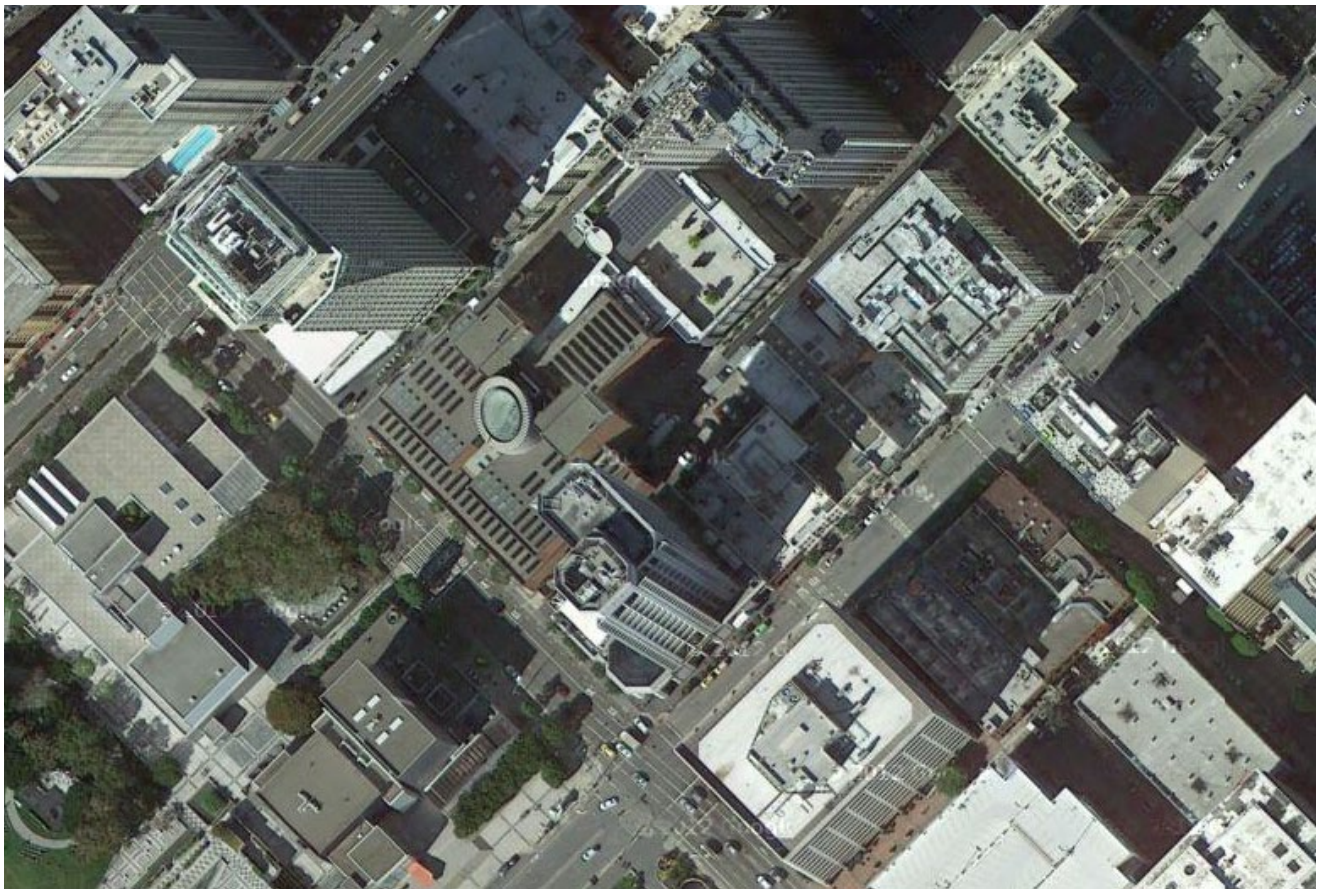
The building is the second-largest single structure in the United States devoted to modern art (after New York's Museum of Modern Art). It replaces the museum's former location at the War Memorial Veterans Building in San Francisco's Civic Center, its home since its founding in 1935

Site

It is located across from the Yerba Buena Gardens and Art Center and, from this view; the building's presence in the urban neighborhood can be appreciated.



Site plan.



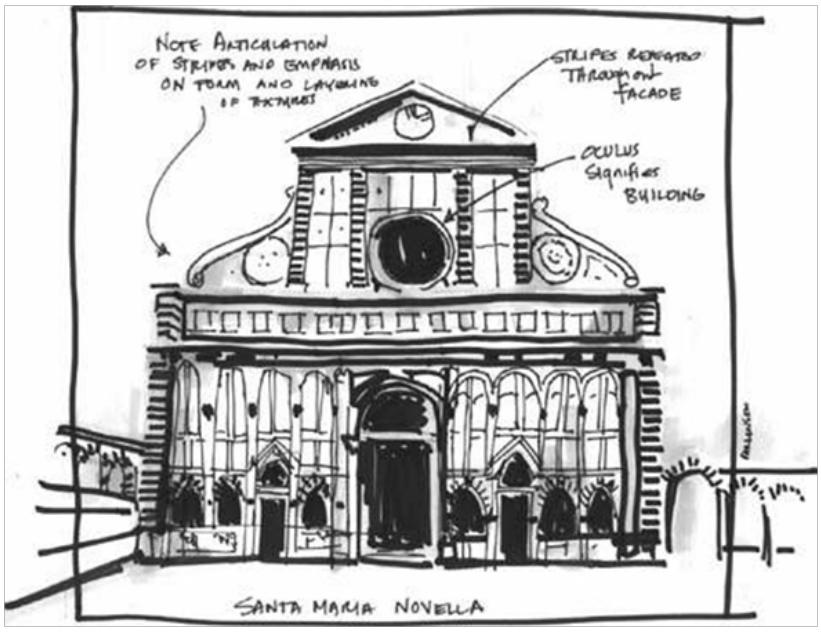
Concept

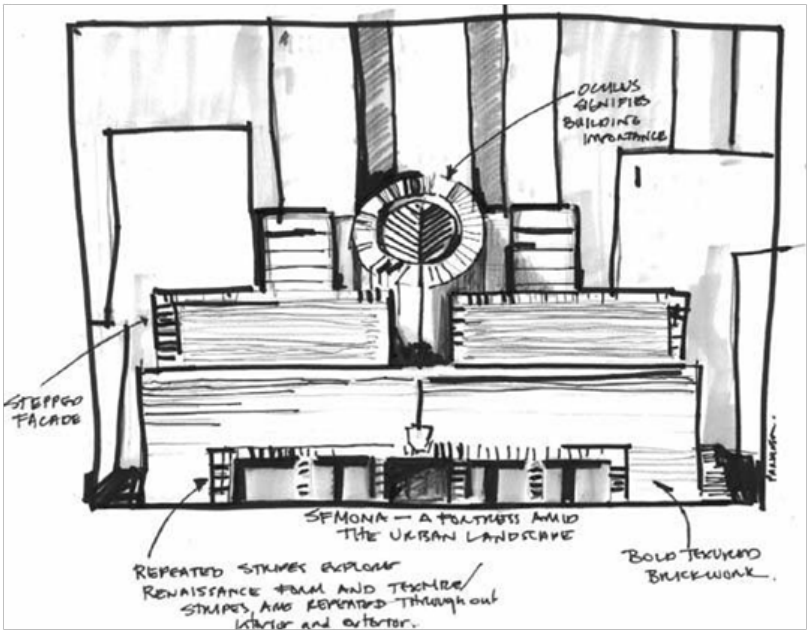
Botta descriped his building saying:

"A space designed to witnessing and searching for a new religiosity."

The architect uses building technology as a symbol of protection and preservation, information and clarity, and contemplation and enjoyment for a large urban community.

Botta was influenced by classical architecture from the Italian Renaissance when designing the San Francisco Museum of Modern Art. His work however is a kind of post-modern classicism that rejects the classical Doric, Ionic, and Corinthian orders. Instead, he explores the layering of color, form, texture, and material found in examples such as the façade of Santa Maria Novella by Renaissance architect Leon Battista Alberti. Botta's exploration of Renaissance technology in the use of geometric form and articulation of horizontal details is exemplified in the San Francisco Museum of Modern Art; here it is accepted





Circulation

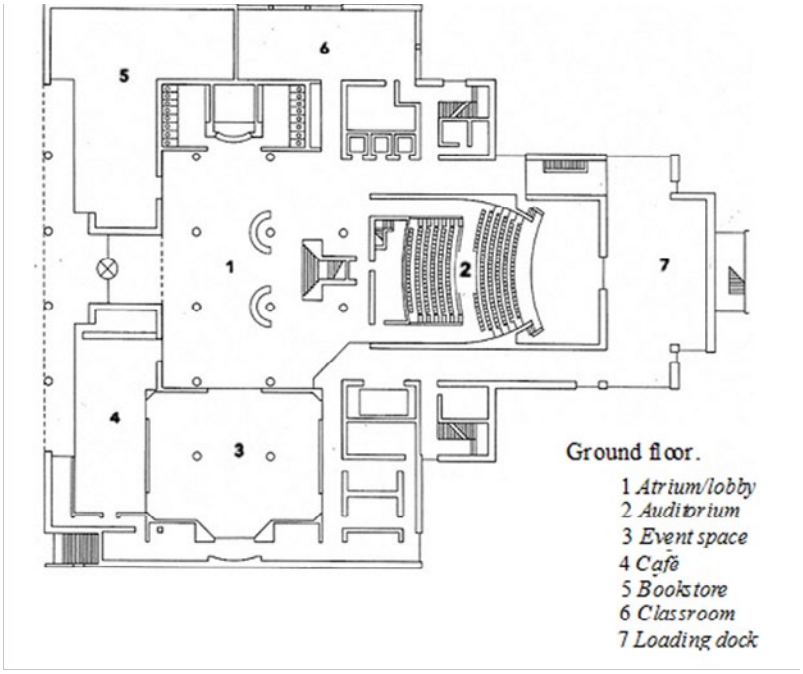
The first-floor gallery (16-ft ceilings) Houses selections from the permanent collection Provides spaces for the architecture and design program.

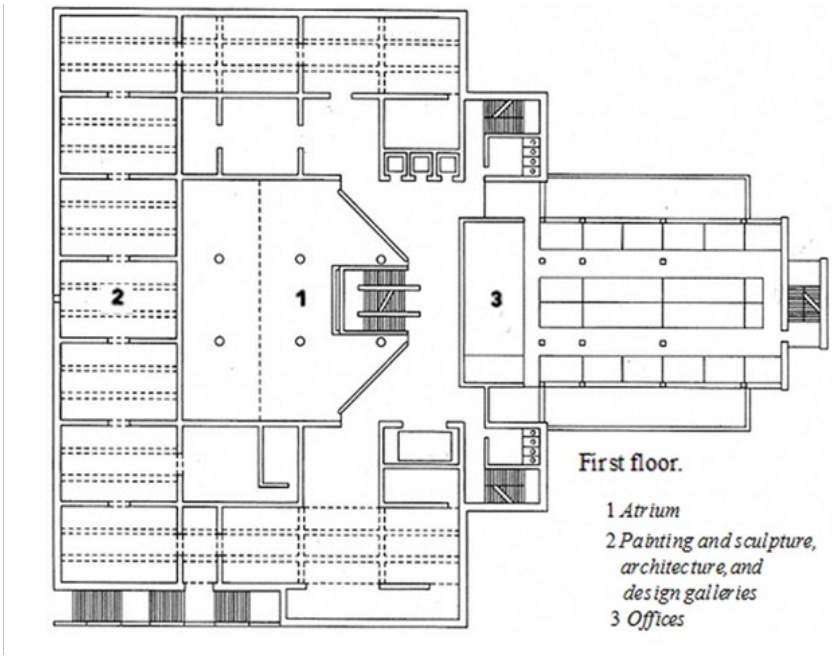
A second-floor gallery with artificial light and 12-ft ceilings, exhibiting photographs and works on paper.

The top two gallery floors (18-ft and 23.5-ft ceilings) are for Special and temporary exhibitions Large-scale contemporary art from the permanent collection Multiple-use event space.

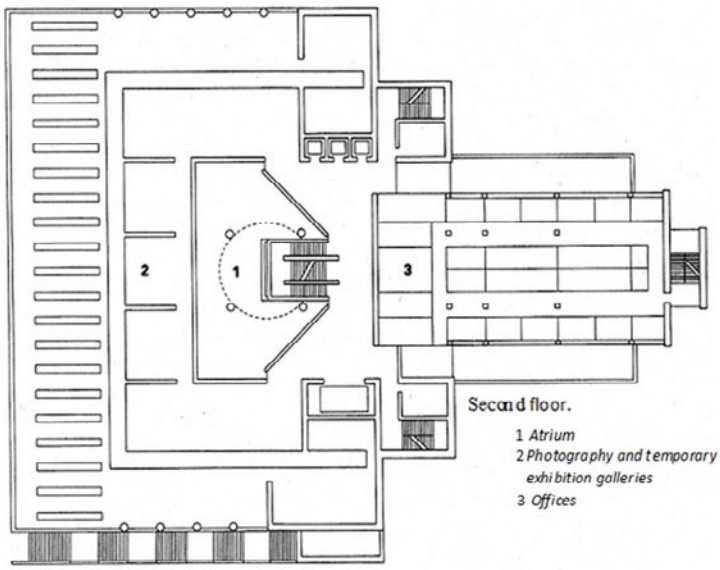
On the fourth floor rear, a state-of-the-art facility for art conservation.

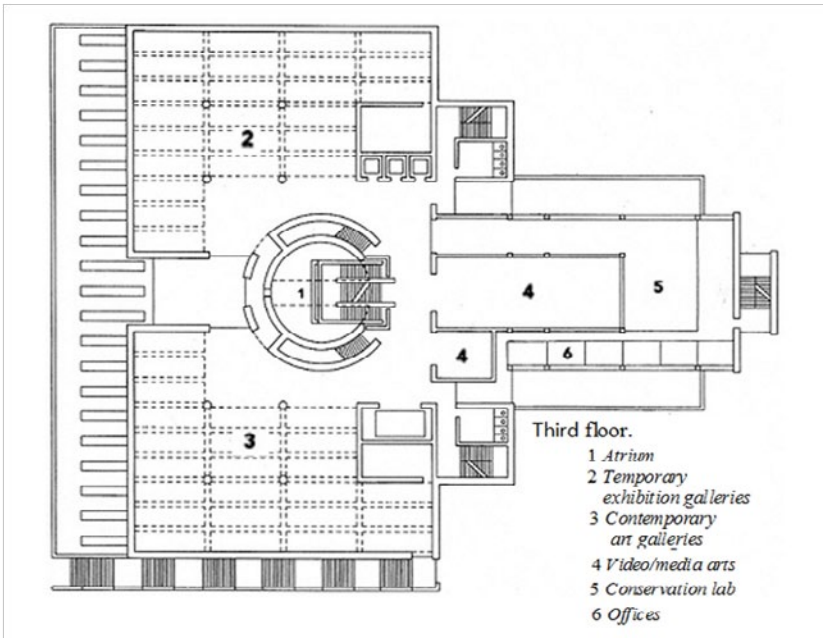
On floors 2 through 4 in the rear, administrative and curatorial offices

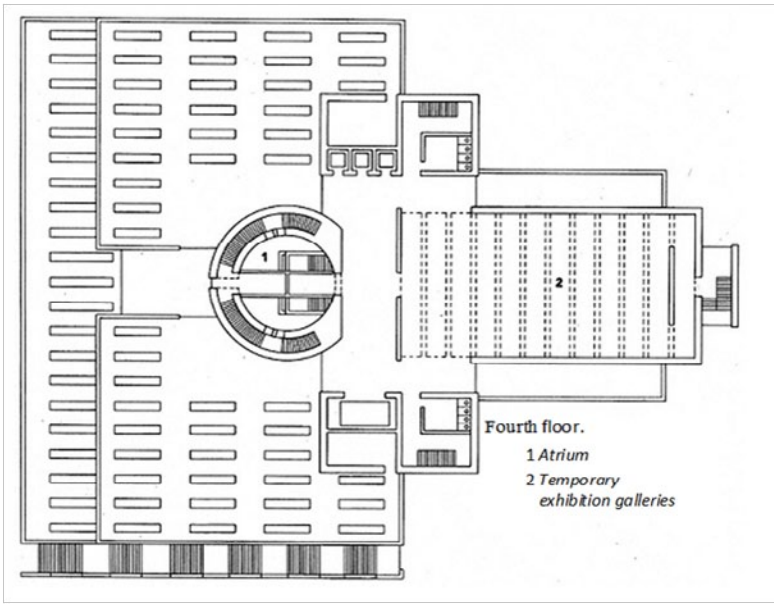




San Francisco Museum of Modern Art, California, USA (1992-1995)







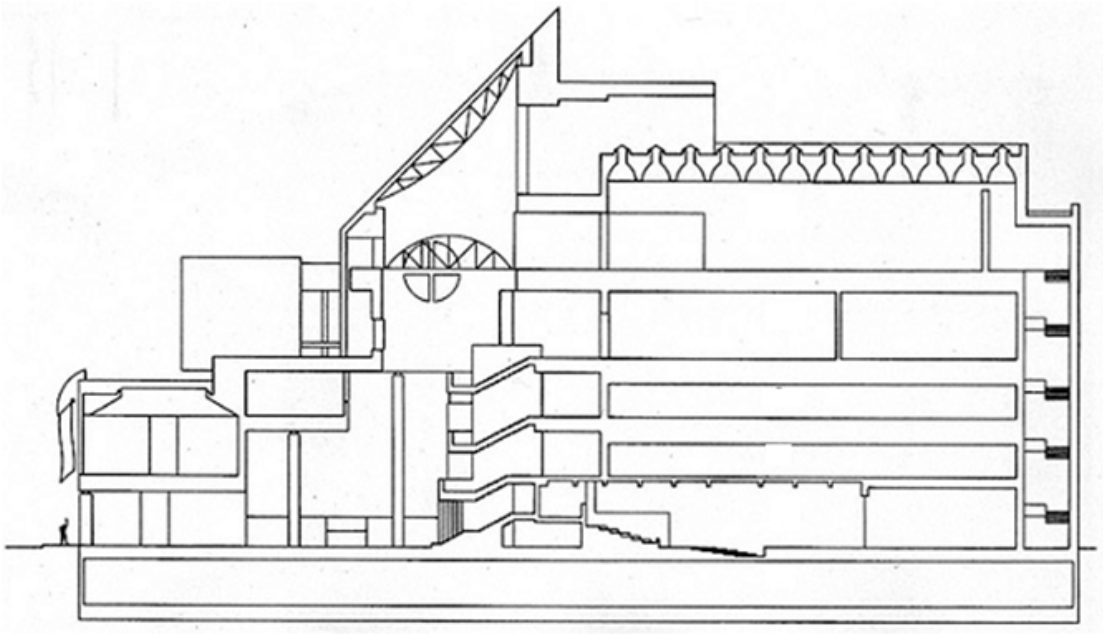
Lighting/Natural Lighting

The sky lit tower serves as a visual and symbolic transition from the massive exterior to the 225,000 square foot interior. It supplies the central atrium court and surrounding galleries with an abundance of natural light.

Botta's use of natural light has a temporal quality: it is a light of change, mood, observation, and contemplation that signifies the museum's intent.

Ceiling systems light condensers combine artificial and natural light for the two top floors of temporary exhibition galleries. These systems eliminate the destructive ultraviolet portions of the spectrum and control foot-candle levels.

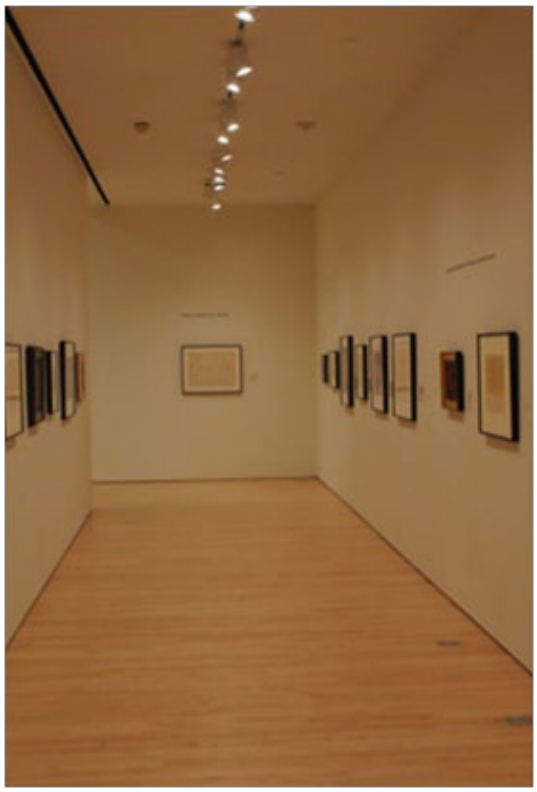
Section through fifth floor exhibition galleries. Note skylight providing controlled natural light

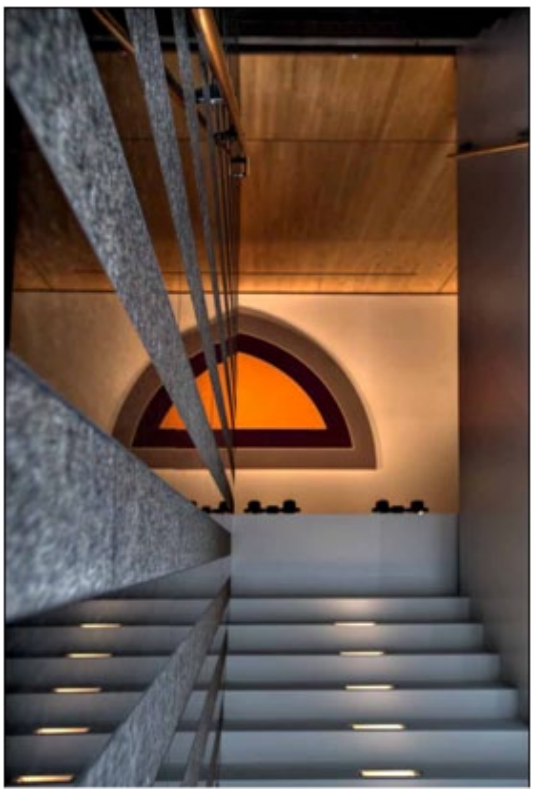


Section showing natural lighting techniques

Artificial Lighting

The artificial light used throughout the galleries as it is required to be static.it's also used for the interior design.





Building Design

Architect Mario Botta says: "The situation of the museum building on a plot surrounded by a three high-rise blocks encouraged the adoption of a particularly powerful image, while at the same time avoiding and direct-and inevitably disadvantageous - comparison with its surroundings. The scheme was carried out with three declared objectives.

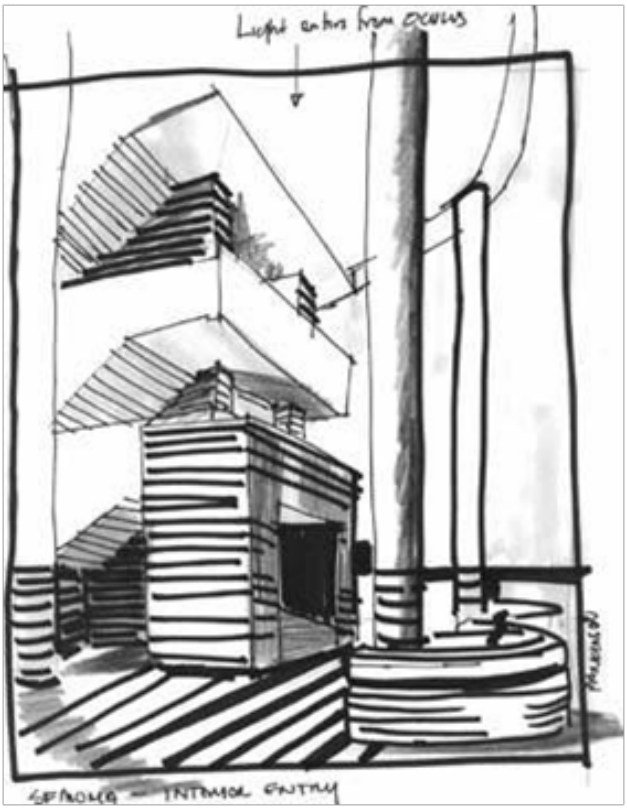
- Natural lighting, in spite of the unfavourable one-to-four relationship between the area of the site and total built surface called for by the programme.
- The creation of a unitary interior image.
- The construction of an external skin which, the opposite of a shell, effectively leaves the building faceless, thus stimulating visitors to enter.

Exterior

Botta had to make the building “fit in” to a specific city; he however does not imitate the expanse of surrounding skyscrapers. Botta uses clarity and thought to continue in the distinct geometric language for which he is famous in his preceding works. Conceived in a modernist tradition of material technology, his language is minimal yet bold in form with richly textured brickwork. His vocabulary includes the circle, that marks the building’s importance in the urban setting. The building is composed of wide oblong steps that emphasize volume. The bold stripes of gray and black granite, so significant in the tower, are repeated at the entrance columns and sides of the buildings

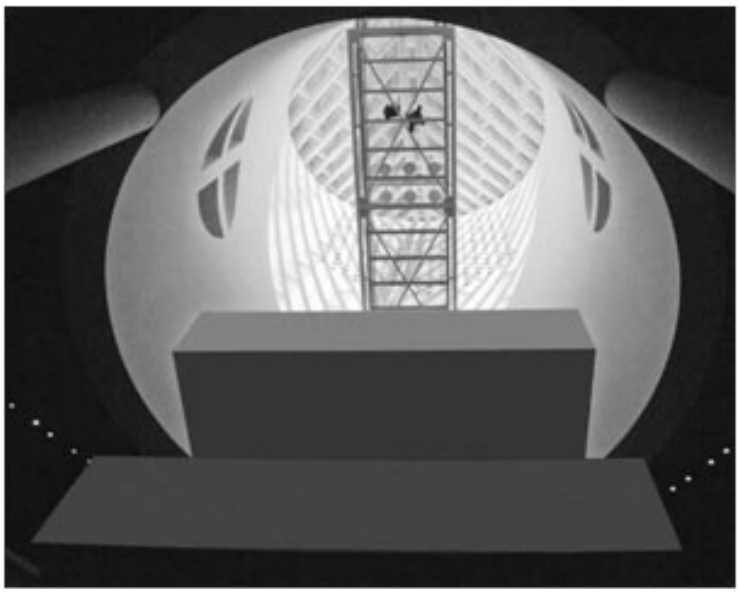
Interior

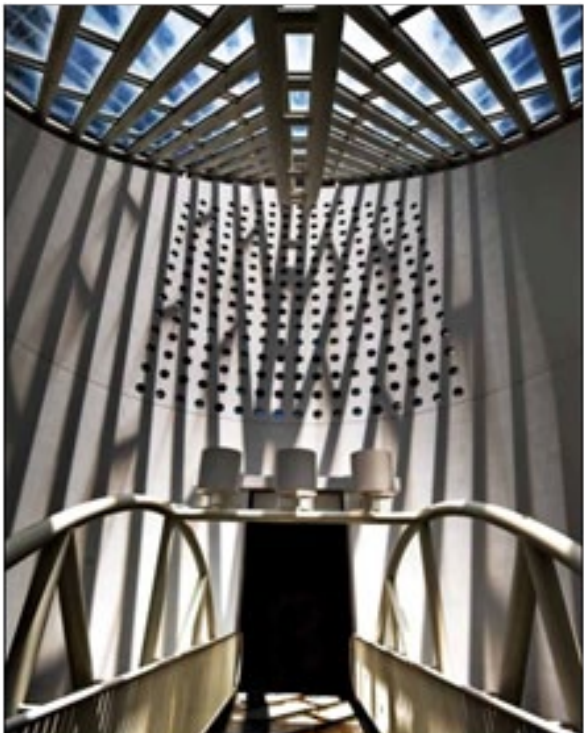
The interior of the atrium repeats the exterior vertical striping; the stripes seem to float as they are repeated on the floor and, then, connect with a sea of light maple partitions and dado that signify entry into the galleries. This floating experience supports the reflective thought of the visitor and compels one to move from gallery to gallery.

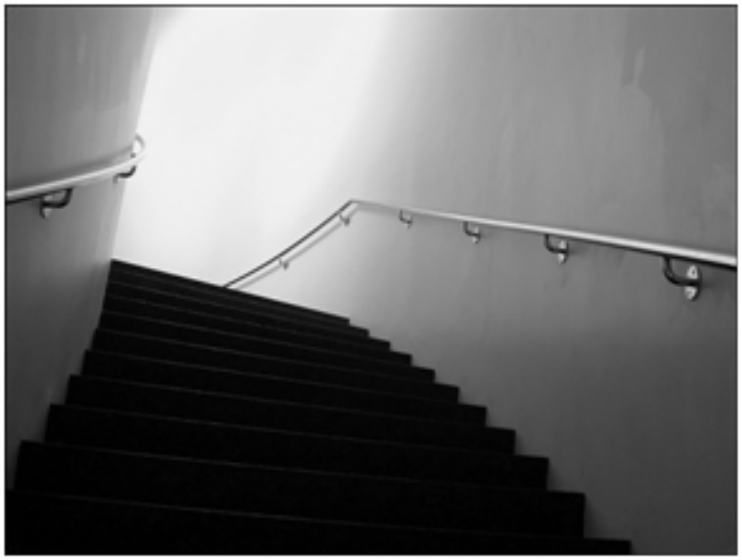


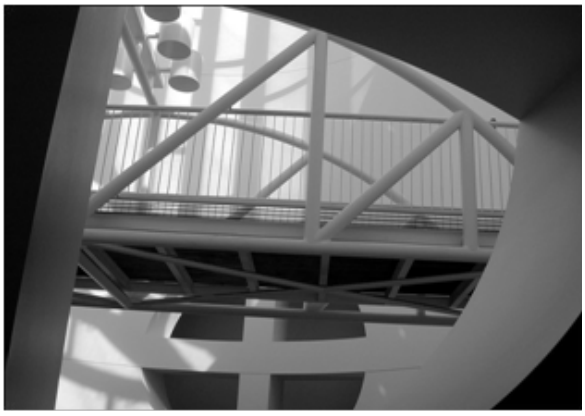
And as one enters the interior atrium, a human familiarity is revealed that is at first uplifting and, then, joyful, as one looks up to see engaged visitors walking across a cat walk that spans the atrium leading to an elevator shaft. The profusion of light and shadow from the circular skylight is juxtaposed to the square geometry of the five storied central staircase—it is exhilarating.

San Francisco Museum of Modern Art, California, USA (1992-1995)









Interior

Materials and colors

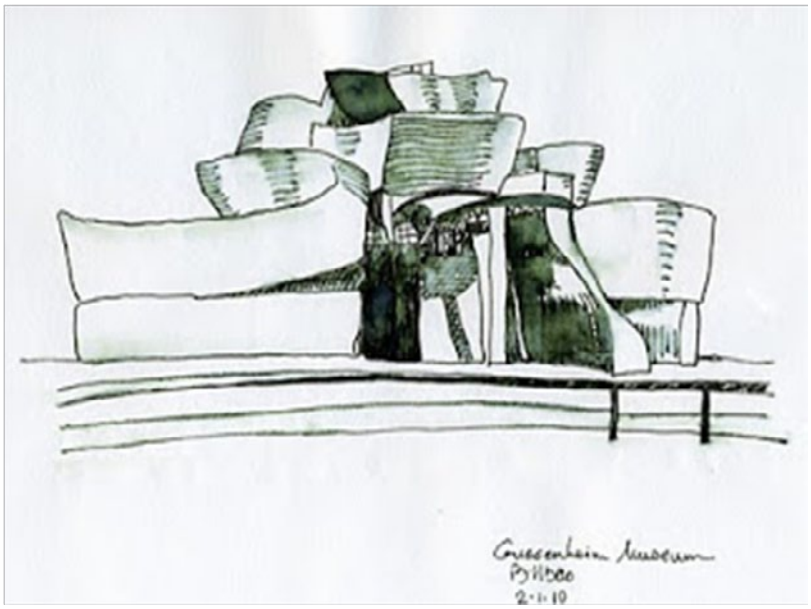
The stepped facade to the fore, finished with brick, accommodates the series of exhibition spaces.

The cylindrical volume clad with The bold stripes of gray and black granite.

The interior design is marked by alternating bands of polished and flame-finished black granite on the floor, ground-level walls, stair and column bases; and bands of natural and black-stained wood on the reception desks and coat-check desk

Display

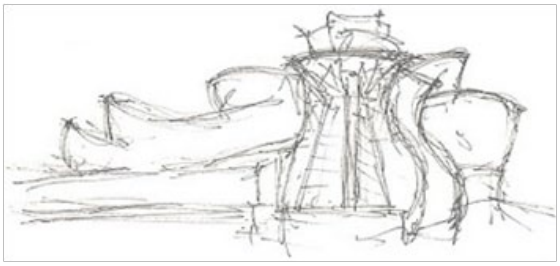
Guggenheim Museum, Bilbao, Spain (1993-1997)

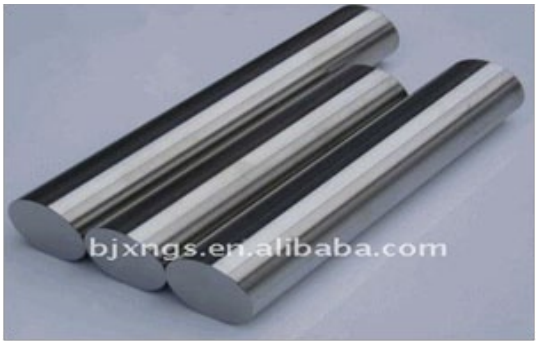


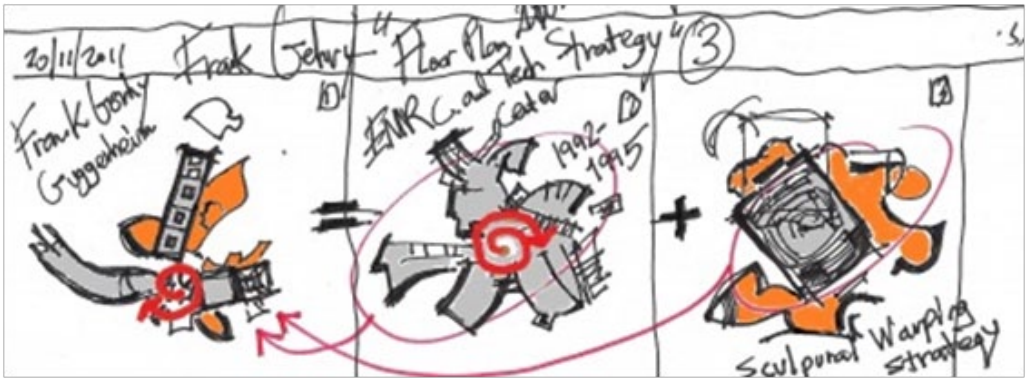
Architect: Frank Gehry
Building Type: Museum of Contemporary Art
Architectural style: modern
Name of School: Deconstraction
Location: City Center Bilbao Alaspainhallowaqah in the Basque Country in Spain next to Ponte di Street Asilva
Client: company Ferrovial [3] Spanish
An area of 32,000 square meters
Opened in 1997

The concept of this museum is the Famous flamenco dance in Spain and the flower in there clothe That Spain is famous for producing metal Titanium what remains in the mind is the organizing metaphor - the robust flower with its riotous petals blowing in the wind. There are something like twenty-six self-similar petals, which reach out and come to a point extended as a line. Just as a Doric column sculpts light and shadow with its flutes, so these petals are pinched to create a shadow line.

The arris or fillet defines each volume in a much more subtle way than at Vitra; perhaps this is a visual refinement, but it is also a clear example of the way in which Gehry learns step by step from his own work. The new complexity paradigm in architecture is simultaneously evolving in different directions







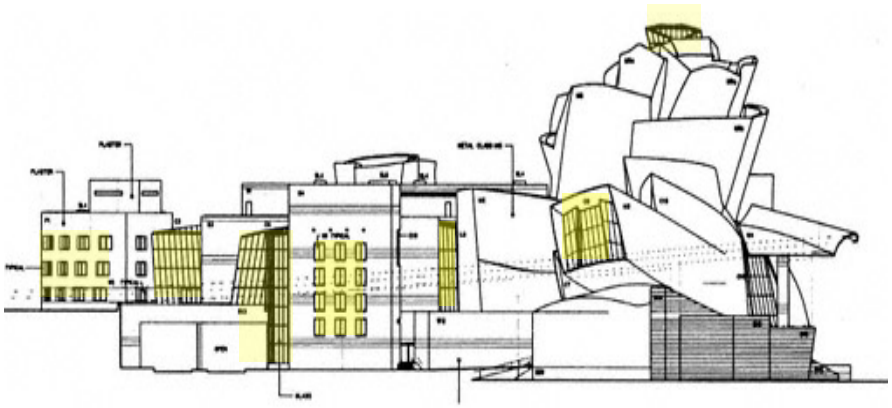
Eliinbar sketches 2011. Frank Gehry's Guggenheim museum in Bilbao, floor plan Strategy

Site:
The 301,000-sq-ft Guggenheim Museum Bilbao creates a dramatic and highly visible landmark for Bilbao. It stands on an irregularly shaped site that marks the center of a cultural triangle formed by the Museo de Belles Artes, the Universidad de Deusto, and the Old Town Hall.

Gehry has related the museum to three city scales: that of the bridge, captured by his tower; that of the existing roof tops, whose heights are acknowledged by the atrium and lower forms; and the Bilbao River, an important historical waterway, which is taken into the scheme, both literally through the large windows and metaphorically through the viscous, silvery forms.

Lighting / natural lighting

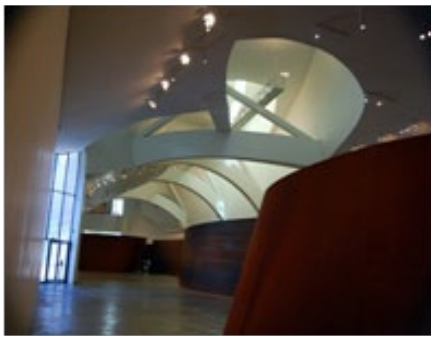
Natural light enters galleries through skylights with adjustable blinds whose spectrum controlled glass limits the penetration of ultraviolet light

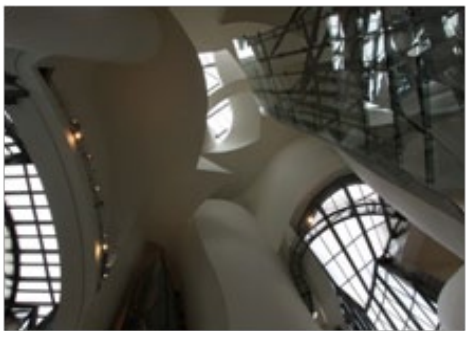


East elevation.

Artifical lighting

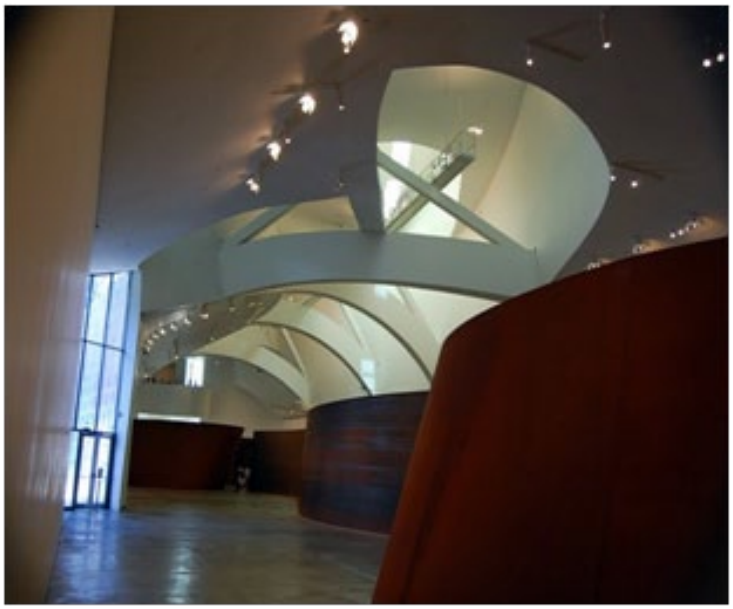
Galleries are artificially illuminated by a lighting system mounted on exposed catwalks suspended from the ceiling.





Source: guggenheim.org

Colors is in contrast and worm in show but there is contrast with The metal While the Bilbao museum has a diversity of form and color.

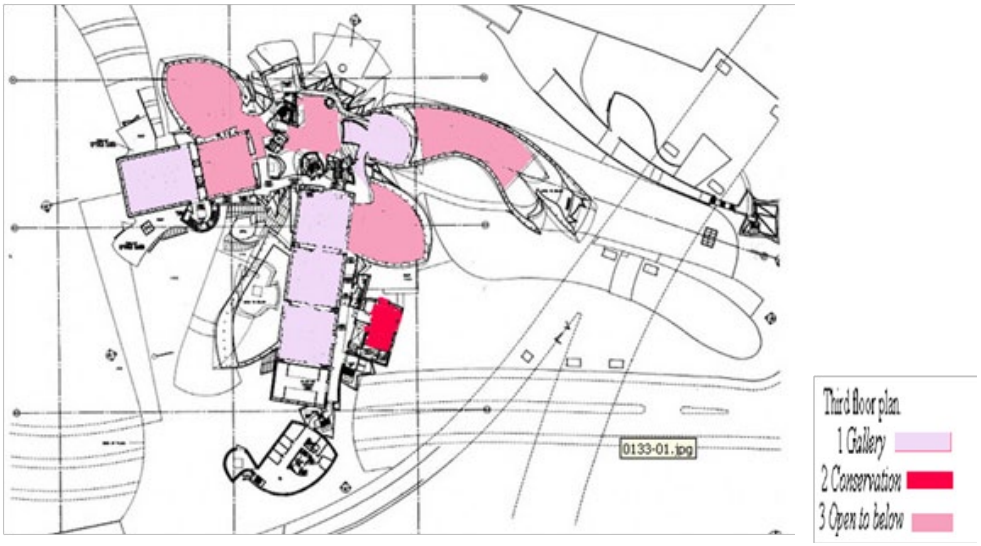


Source: guggenheim.org

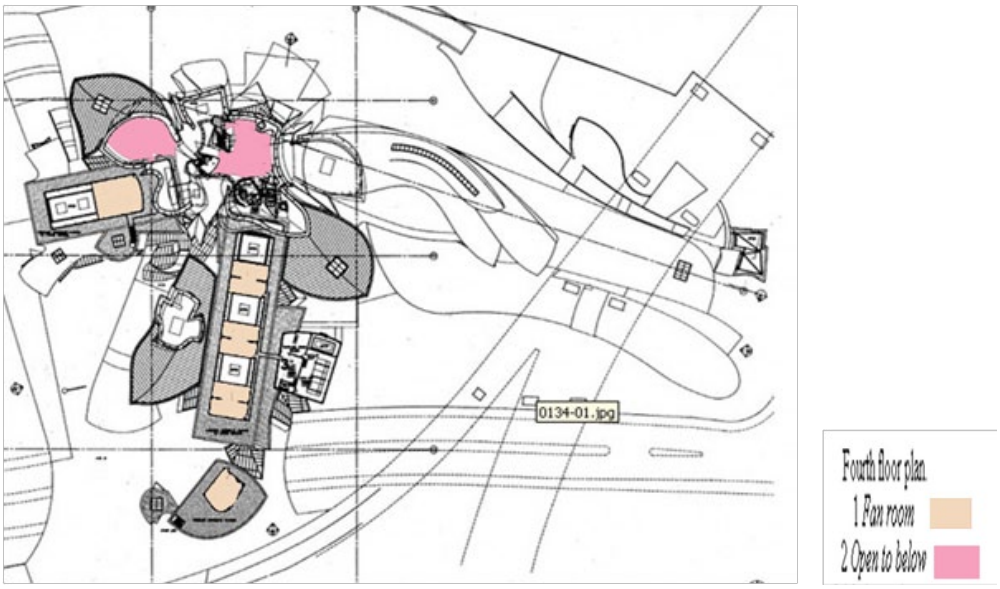
The museum is composed of interconnected building blocks, clad in limestone, which house exhibition spaces and public facilities.

First floor plan

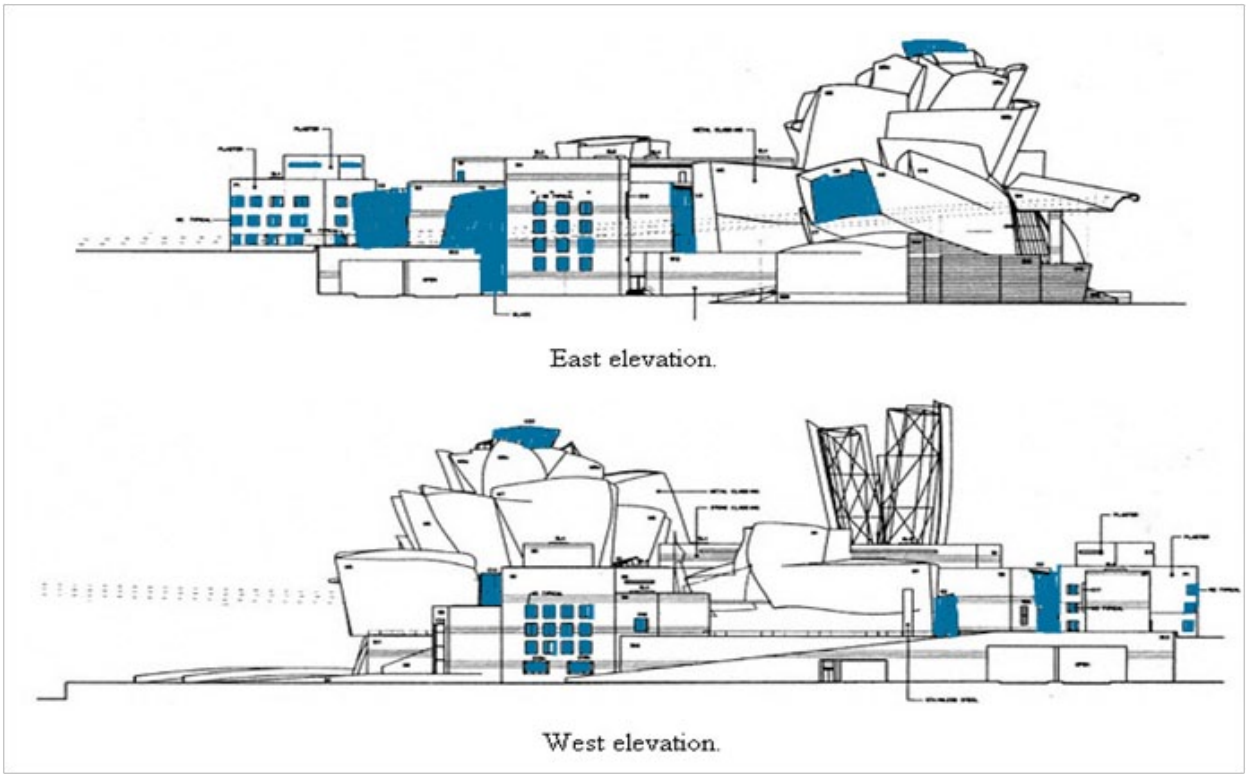
Second floor plan



Third floor plan

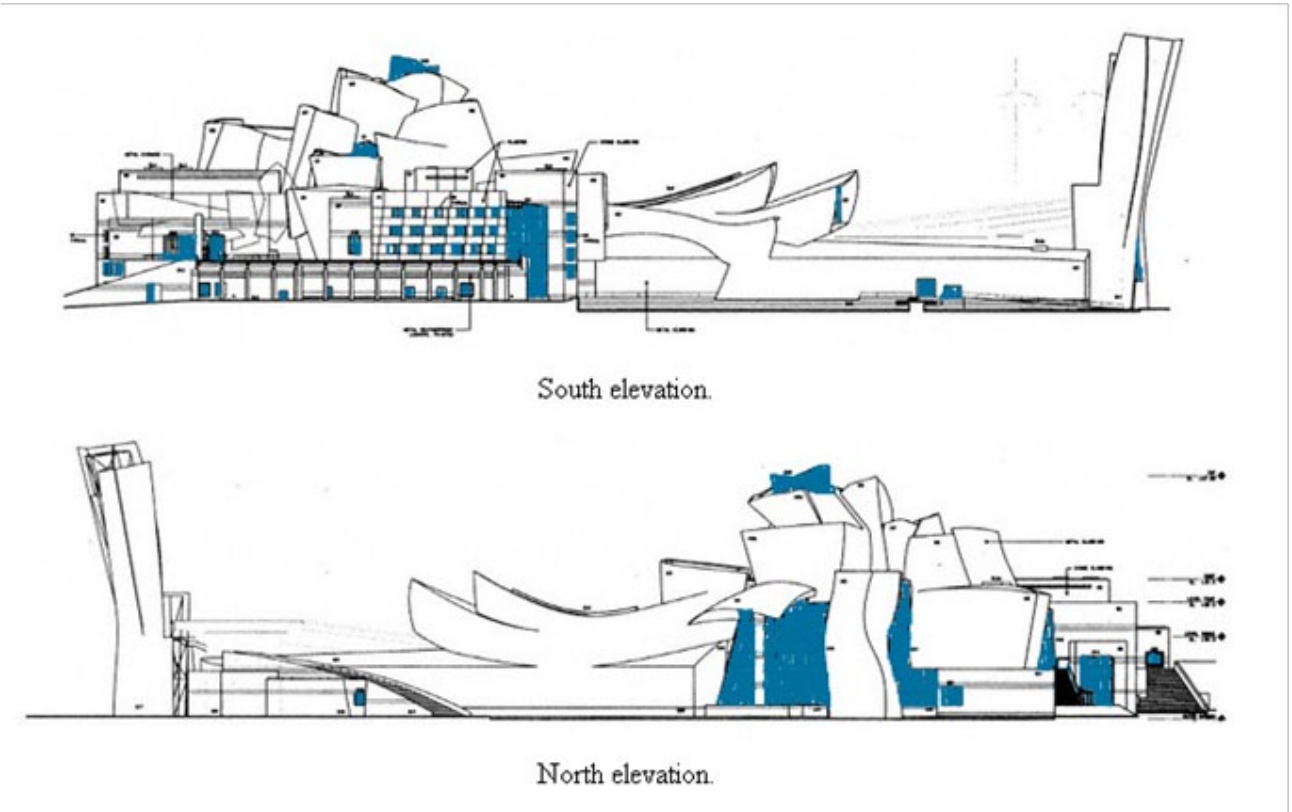


Fourth floor plan



East elevation.

West elevation.



South elevation.

North elevation.

elevations

spaces
The central feature of Gehry's design is a 165-ft-high atrium, more than one and a half times the height of the rotunda of Frank Lloyd Wright's building in New York. Flooded with light from glazed openings in the roof, the atrium is served by two glass enclosed elevators and curvilinear pedestrian catwalks that connect with two stairways, providing views of the river and the city and hills beyond.

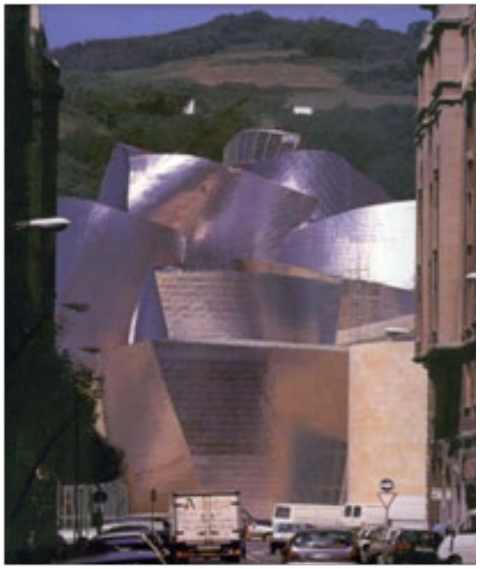
To connect the city to the museum, Gehry has created an atrium space more powerful than any other, even New York's original Guggenheim, which also has a large expanding space at its center (see pi57 for an early view of Gehry's model). The Bilbao atrium does not have a function beyond orientation and thus it could be conceived as both a pure aesthetic space and public town square, opening out to the river. Aware that this relative freedom allowed him to upstage Wright at his own game of spatial gymnastics, Gehry said he intends to have a holographic portrait of that wilful architect looking down on visitors, jealously, disapprovingly. Formally, the new atrium takes the exterior grammar and turns it inside out, so that the petal shapes compress inwards, and bend upwards with curved glass. The result is a new kind of ambiguous architecture, more folded onto itself than the glass box which introduced Modernist notions of transparency. Views are partly veiled by walls of light that lead the eye up to the public ramps and roof terraces, which in turn give onto the urban landscape and river - making the museum a celebrant of the city.

sections

Galleries
Three levels of galleries are organized around the central atrium. Included are those designed for the presentation of large-scale works of art and site-specific installations that could not be mounted in more conventional museums.


walls
Individual building components are unified into a single architectural composition by the Guggenheim Museum Bilbao's signature roof, a composition of twisting, curving, and jutting forms made of titaniuma metal rarely used in construction, but suited to the saltwater marine environment of Bilbao.





Source: guggenheim.org

MAXXI Museum, Rome, Italy (1999-2009)

Architect Zaha Hadid

Photos Credit: Iwan Baan

The museum participates actively to the location – Rome, and its first outskirt, not a part of the old centre, but still central.

The Flaminio neighborhood has been interested in the last years by a renovation program of public attraction, the latest being the Auditorium by Renzo Piano. The long MAXXI construction process completes the idea of a renewed city. Moreover, MAXXI is the first national museum of contemporary art in Italy.

It will bring a lot of attentions, by public and media, together with economical activities, rendering this museum a central point for Rome, which is in constant look for its contemporary identity.



the museum is 'not a object-container, but rather a campus for art', where flows and pathways overlap and connect in order to create a dynamic and interactive space. Although the program is clear and organized in plan, flexibility of use is the main goal of the project.

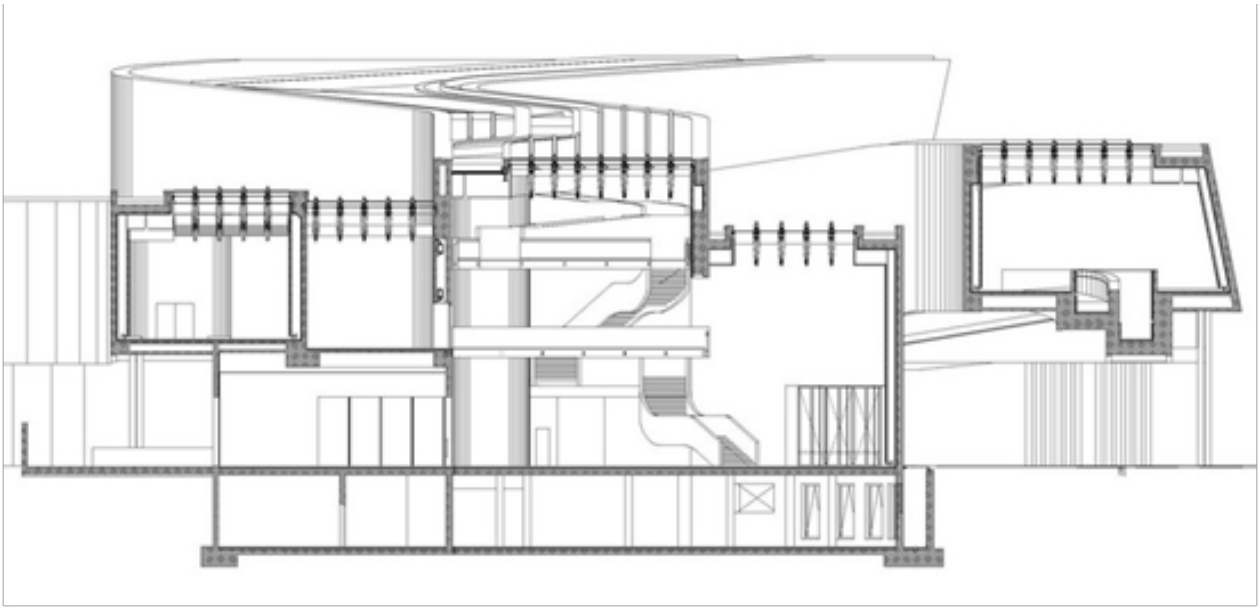
Continuity of spaces makes it a suitable place for any kind of moving and temporary exhibition

ZahaHadid intended 'a new fluid kind of spatiality of multiple perspective points and fragmented geometry, designed to embody the chaotic fluidity of modern life'

LIGHTING:
Particular attention has been given to the natural lighting, by the thin concrete beams on the ceiling, together with glass covering and filtering systems. The same beams have a bottom rail from which art pieces are going to be suspended. The beams, the staircases and the linear lighting system guide the visitors through the interior walkway, which ends in the large space on third level. From here, a large window offers a view back to the city, though obstructed by a massive core.

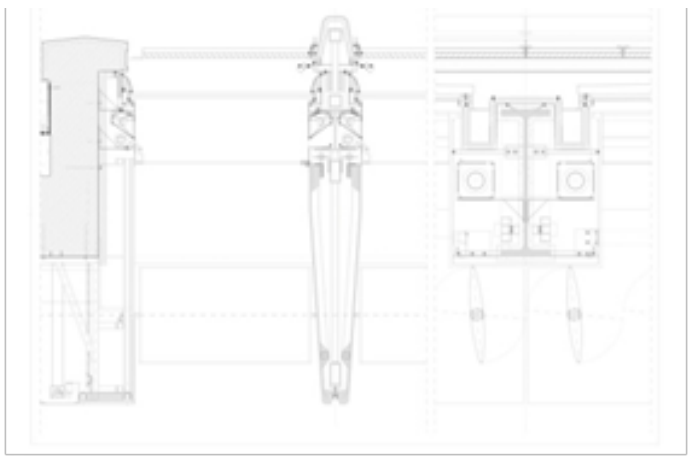
NATURAL LIGHTING

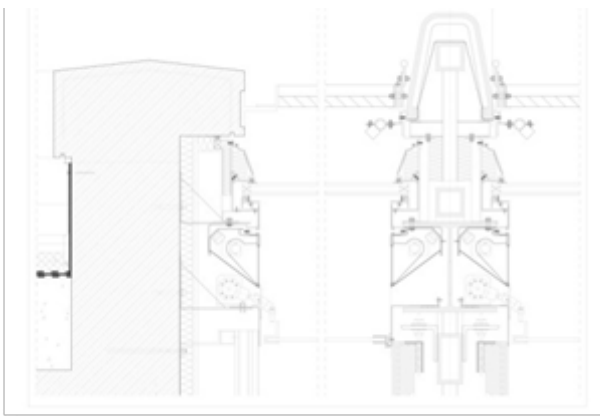
In the context of the broad project for preserving works of art inside a museum, It is essential to consider the problems of protection from sunlight, in order to counter the occurrence of changes in colour caused by the aggressive action of UV and IR rays that pass through the windows of the exhibition halls.



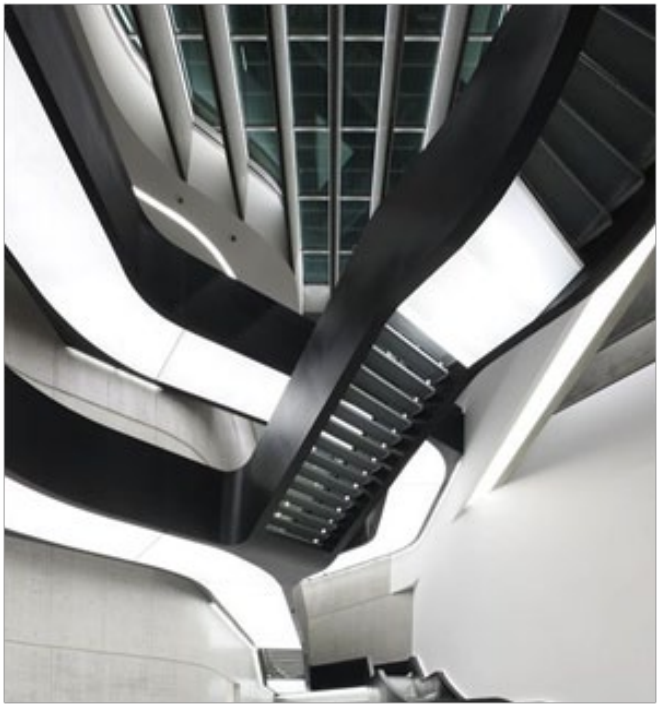
This was achieved thanks to a special sun-screening film for outside use of the latest generation, applied to the windows. The film in question is Madico SG330EXSR, which is 75 microns thick had consists of a special double long-lasting and scratchproof film. It enabled 99% of the UV light to be kept out and over 70% of the incident energy to be reflected, ensuring a solar factor lower than G = 0.20.

Unlike other typologies on the market, the solution adopted eliminates the undesired "mirror" effect, thus enabling two-directional visibility as requested by the technical management of the MAXXI Museum. This enhances the osmotic relationship between indoors and outdoors, between the works of art and the visitors. The effectiveness of the "glass + film" package is guaranteed by the high level of efficiency provided by the system

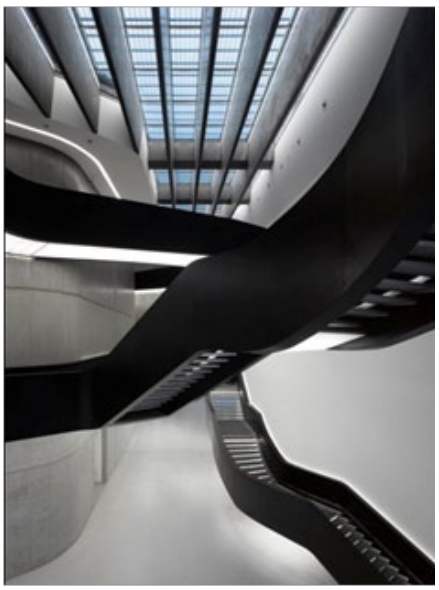


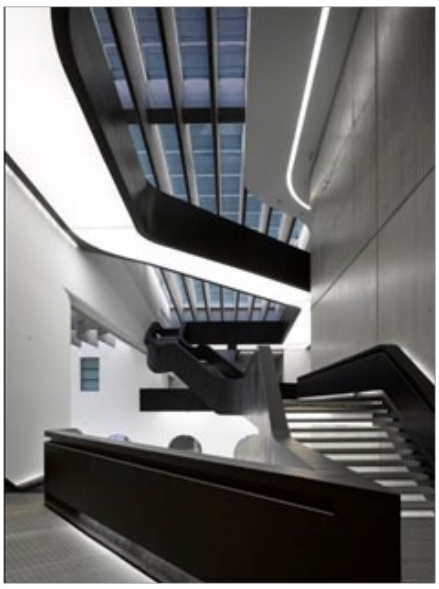


ARTIFICIAL LIGHTING:
On the second and third floors, the tunnels have a "lid" of glass and steel ribs. The "tunnels" house a series of galleries, which can be reconfigured by the curators

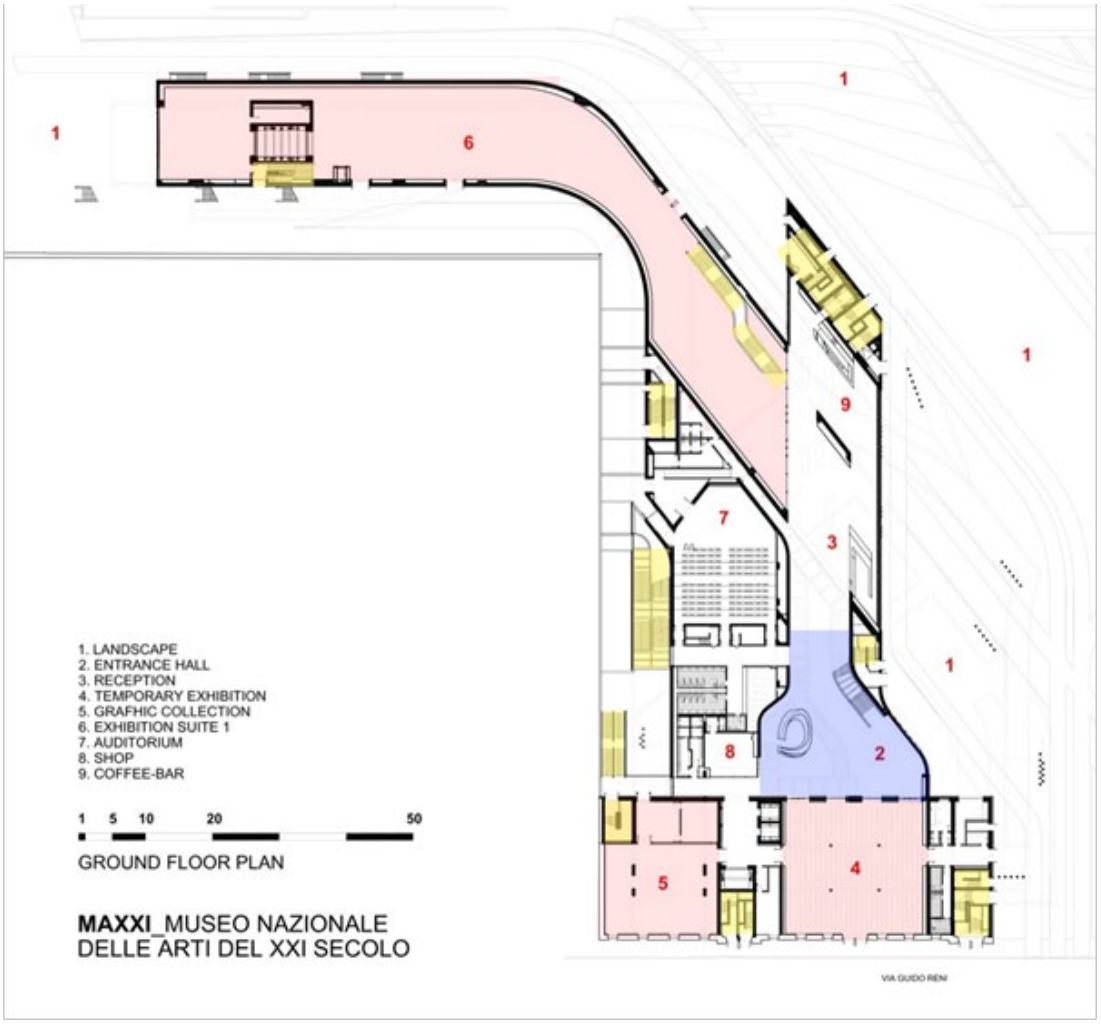


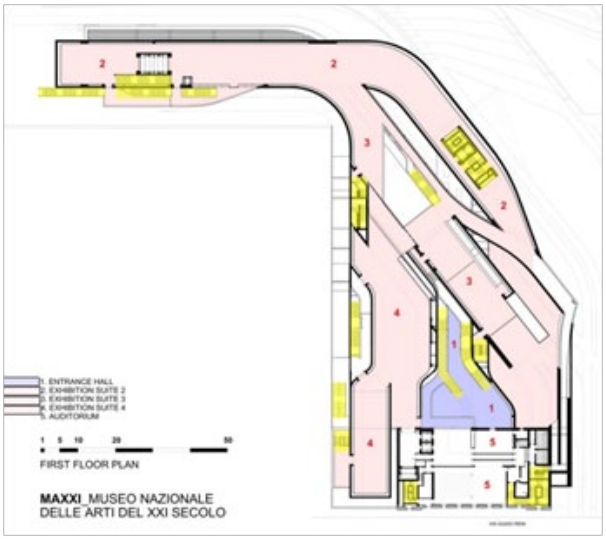
COLOR:
The vertical &horizontal element circulations are with contrast color

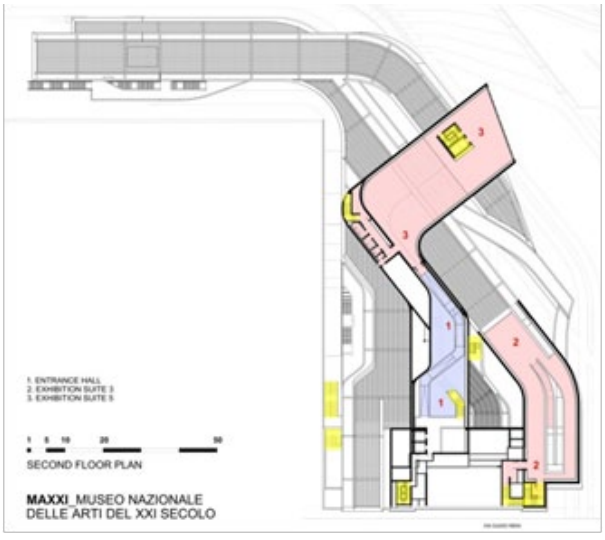


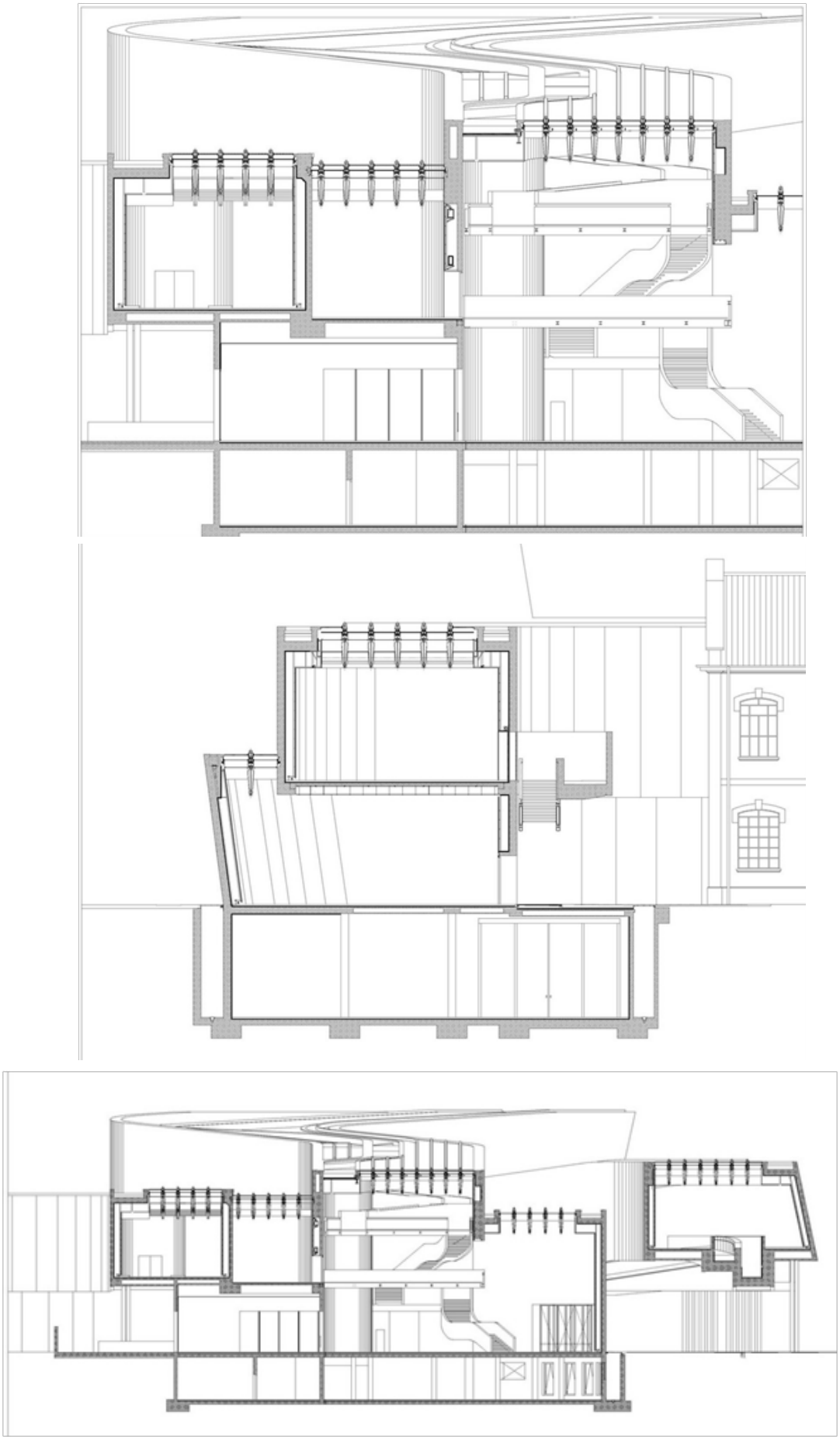


Circulation:
Continuity of spaces makes it a suitable place for any kind of moving and temporary exhibition, without redundant wall divisions or. Entering the atrium, the main elements of the project are evident





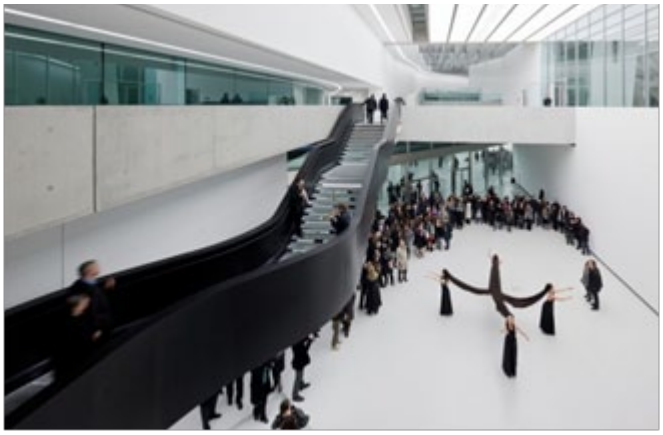




Sections

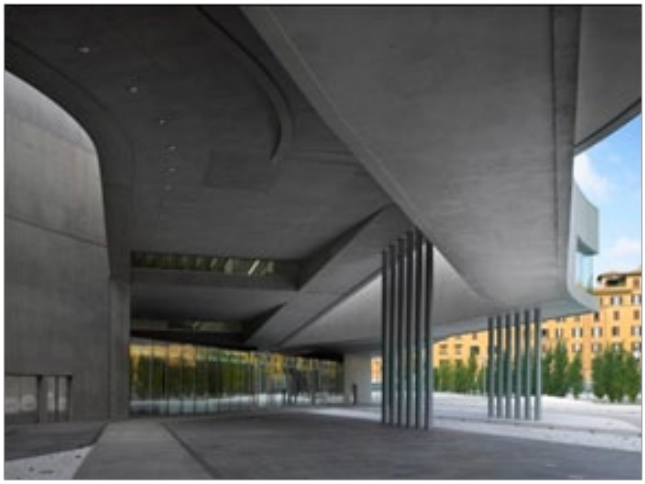
Spaces

Overhanging the façade is a box, a gallery on the upper storey that brings to mind playful Surrealist biomorphism in how this structure seems to flop over the wall below and 'look' outward, mask-like. Once inside, you enter another world, structured around the fluidity of sculptured space, curvilinear shapes defying Cartesian coordinates and geometrical symmetry. Instead, slim black staircases swoop down seemingly with no support, breaking into the hues of whites and greys on walls and floor. You get the sense of being in multiple buildings, never the feeling of being in a fixed space, in a boxy room defined by sharp verticals and horizontals.



Walls

theMaxxi is a light grey concrete construction which does not offend the Pompeian reds, desaturated yellows and terracottas that surround it. What is so striking from the outside is not the new building's ghosted colour, but its sinuous design that rejects both the earnest engineering look of much British architecture, for example, Stirling's, and the many postmodern parodies of recent memory, showing how here, as in all her work, ZahaHadid has opted for a celebration of contour, of the craft itself, and
for extending technical possibilities.



Displaying:

"When I went back to Rome I discovered that it was designed by Iraqi architect ZahaHadid, who won the important RIBA Stirling Prize for architecture. Actually, the judges decided that the MAXXI Museum (Museum of 21st Century Arts) is her best work."

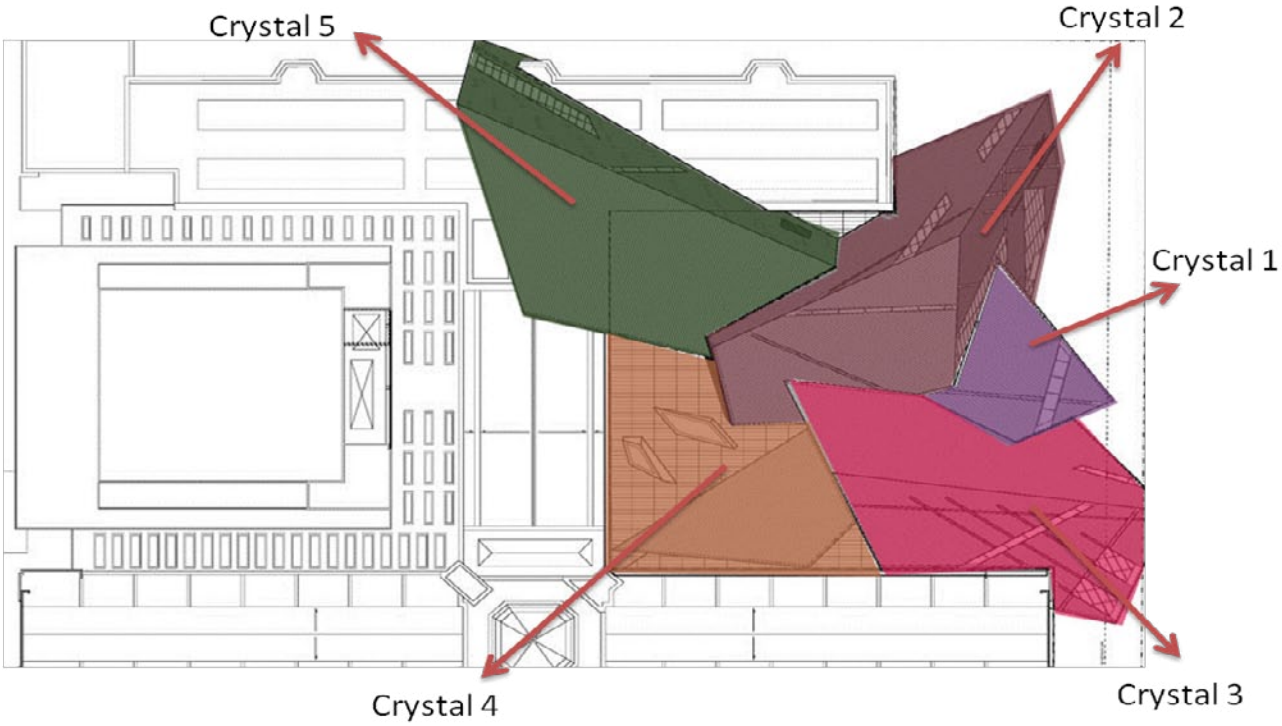
David Brancaleone

Royal Ontario Museum, Ontario, Canada (2004-2007)

ARCHITECT: DANIEL LIBESKIND
LOCATION: ONTARIO, CANADA
ADDRESS: 100 QUEEN'S PARK
YEAR OF COMPLETION ： 2007
STYLE ： DECONSTRUCTIVISM
MATERIAL ： GLASS - ALUMINUM

CONCEPT

the michael lee-chin crystal derives its name from the building's five intersecting volumes, which are reminiscent of crystals. the intersection of two of the crystals, each of which is dedicated to new galleries, creates a void, known as the spirit house. essentially a large atrium rising from below ground level to the fourth floor, and containing a number of criss-crossing bridges at various levels, the spirit house is intended to be a place for visitors to reflect upon the exhibitions they have experienced in one of the gallery spaces before moving on to the next.

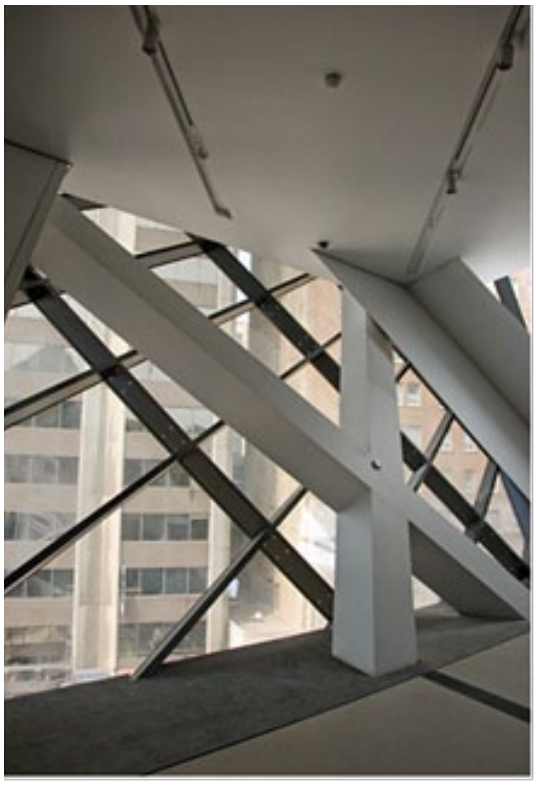


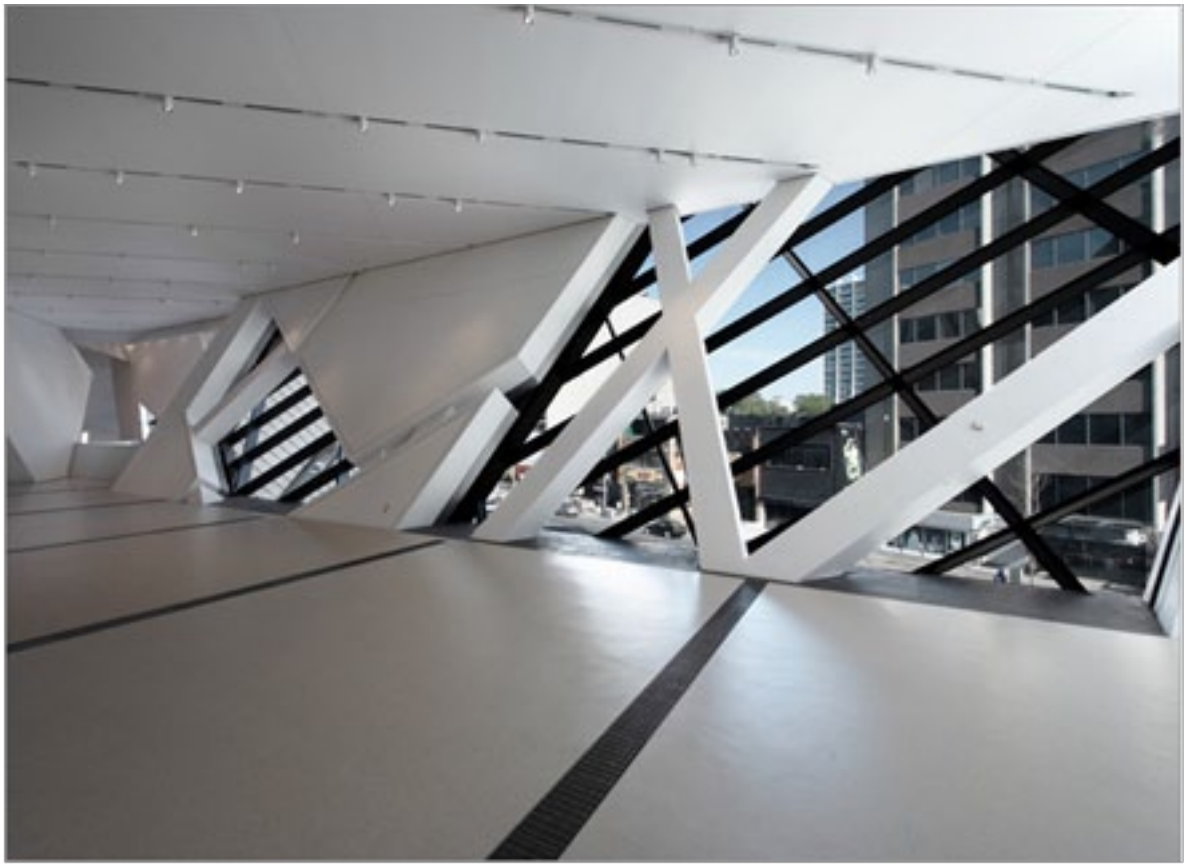
SITE

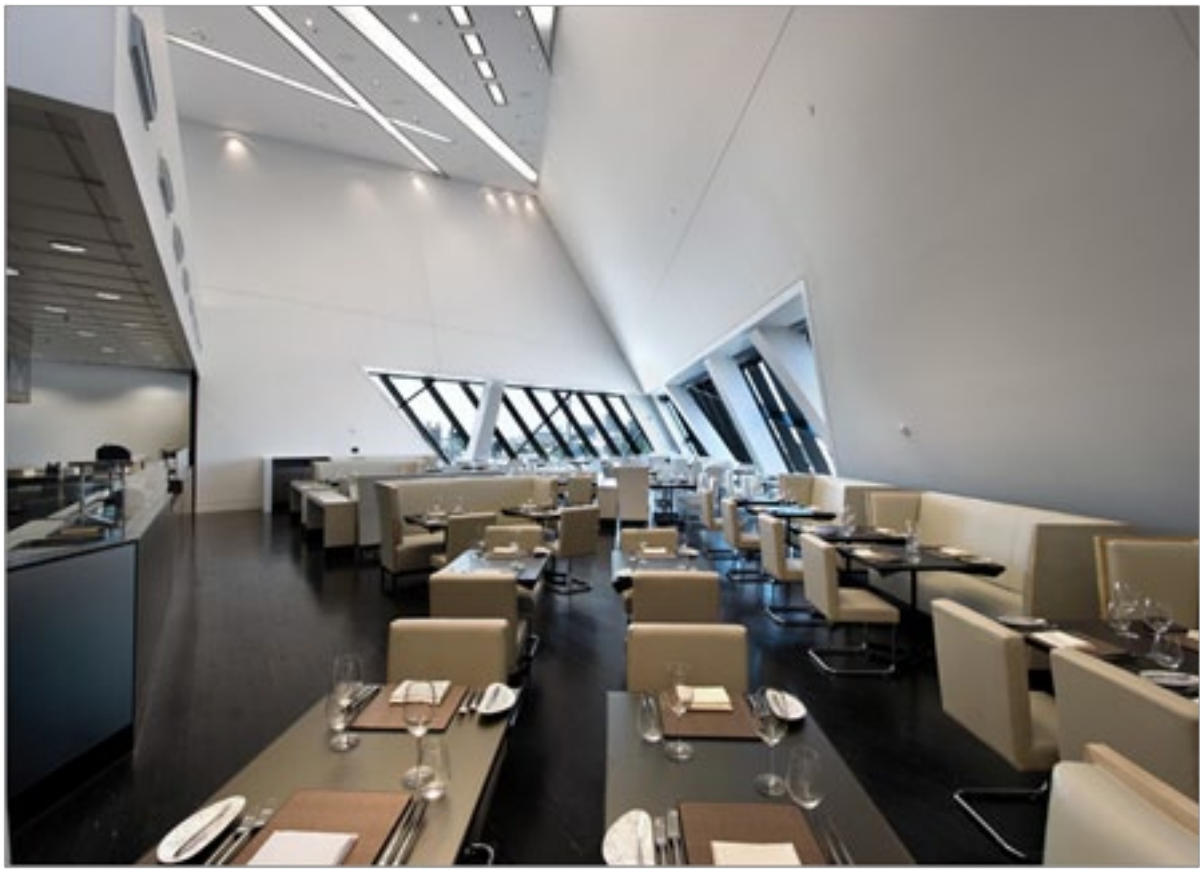
the royal ontario museum project set out to renovate ten new galleries in the existing historical building and creating an extension to the museum, now called the michael lee-chin crystal. this new extension provides innovative new architecture and the creation of a grand public attraction with 100,000 sq. ft. of new exhibition space. situated at one of the most prominent intersections in downtown toronto, the museum has become a dynamic center for the city

LIGHTING/natural lighting

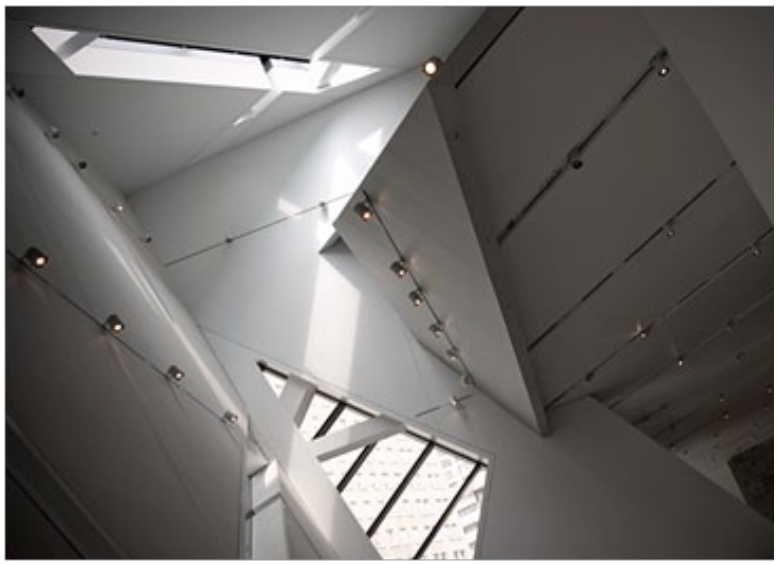
naturally daylight exhibition spaces are having a renaissance, leaving behind the black-box track-and spotlight technique that until recently dominated us institutions. with daylight's dynamic ever-changing nature and better color rendering than artificial light - plus the environmental bonus of energy efficiency the benefits are clear on this project, with the geometries set by the architect, fundamental changes were rarely made, and arguably arup's input might initially seem more peripheral

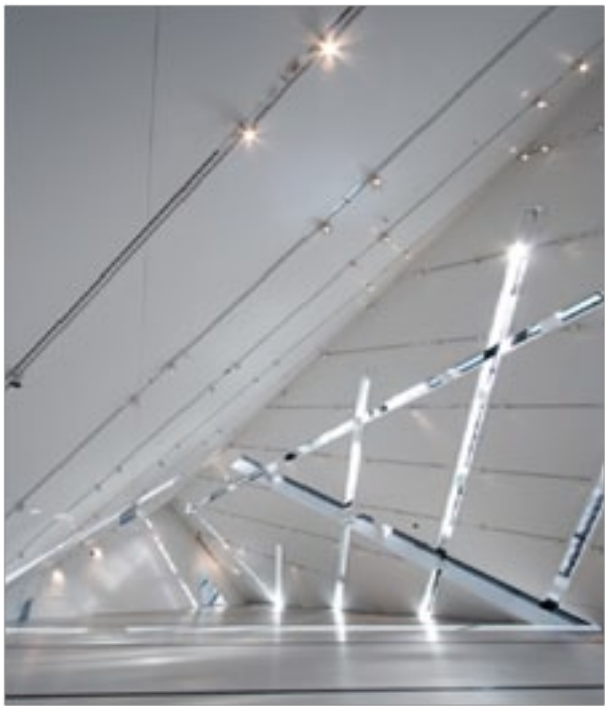






Artificial lighting
on this project used mounted spots.





Walls
Consisting of five interlocking and self-supporting crystalline shapes, 25% of the exterior is glass75% aluminum (there are 52 windows), while the rest is three layers of aluminum cladding, giving it a brushed metal, corrugated appearance.
The Crystal's canted walls do not touch the sides of the existing heritage buildings, used to close the envelope between the new form and existing walls

Colors

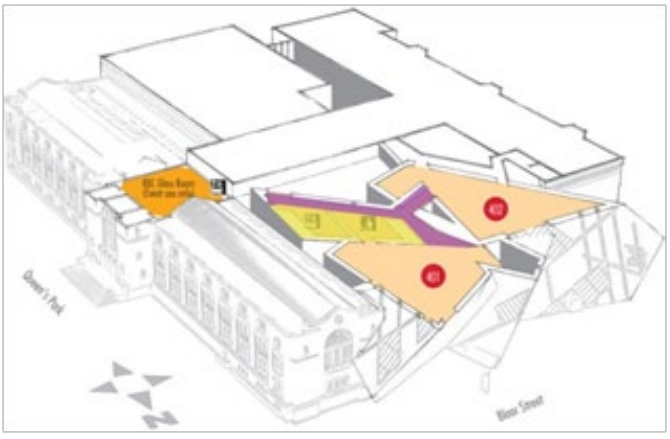
The vertical &horizontal element circulation are with deferent color



Circulation

vertical and horizontal circulation:



Vertical circulation Horizontal circulation

Spaces

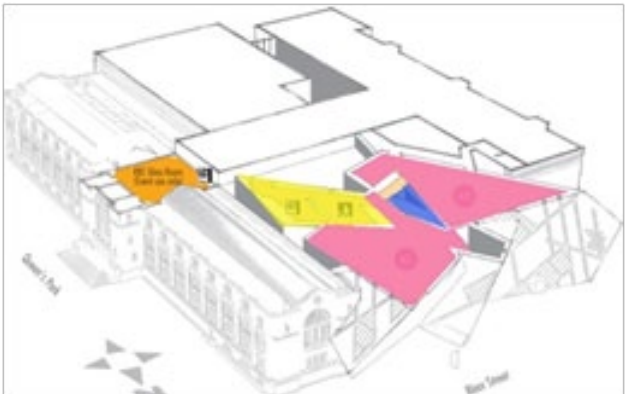
The Michael Lee-Chin Crystal derives its name from the building's five intersecting volumes, which are reminiscent of crystals. when dramatic spaces such as those created by Libeskind have to perform a practical role for exhibitions.

The intersection of two of the crystals, each of which is dedicated to new galleries, creates a void, known as the Spirit House. Essentially a large atrium rising from below ground level to the fourth floor, and containing a number of crises-crossing bridges at various levels, the exhibitions they have experienced in one of the gallery spaces before moving on to the next. A fourth crystal, known as the Stair of Wonders, is dedicated to vertical circulation. A fifth crystal houses the major new restaurant

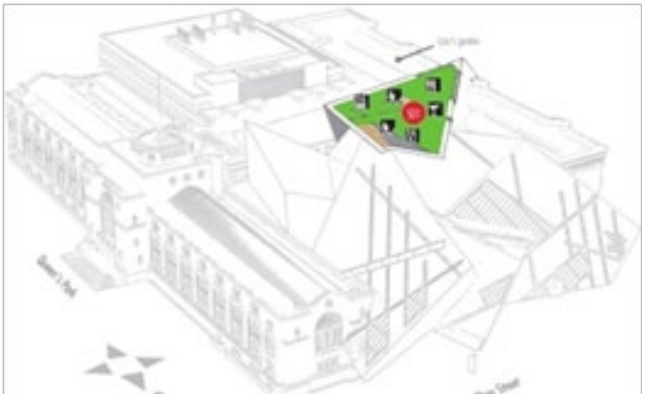
level one

2

3

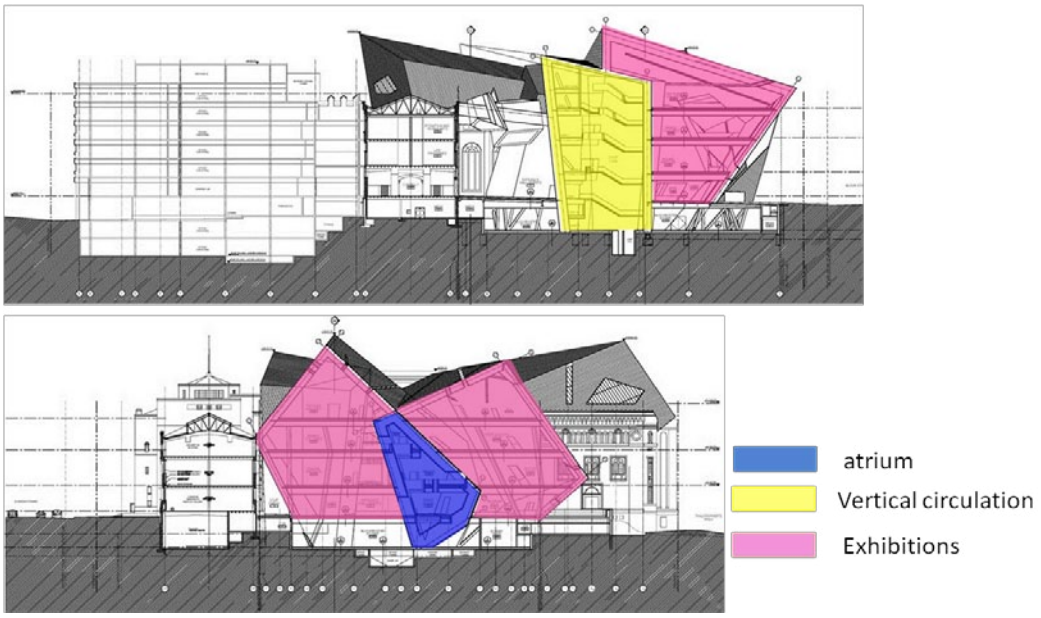


4

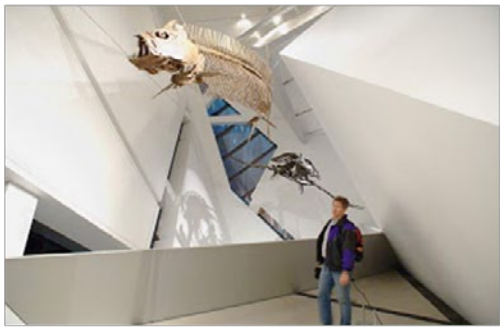


5

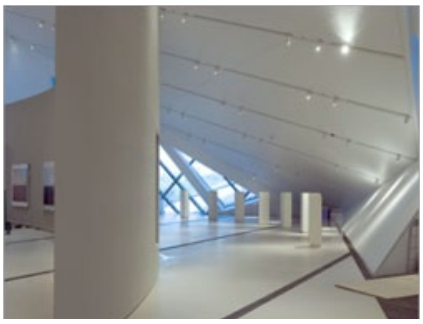
Sections



Display

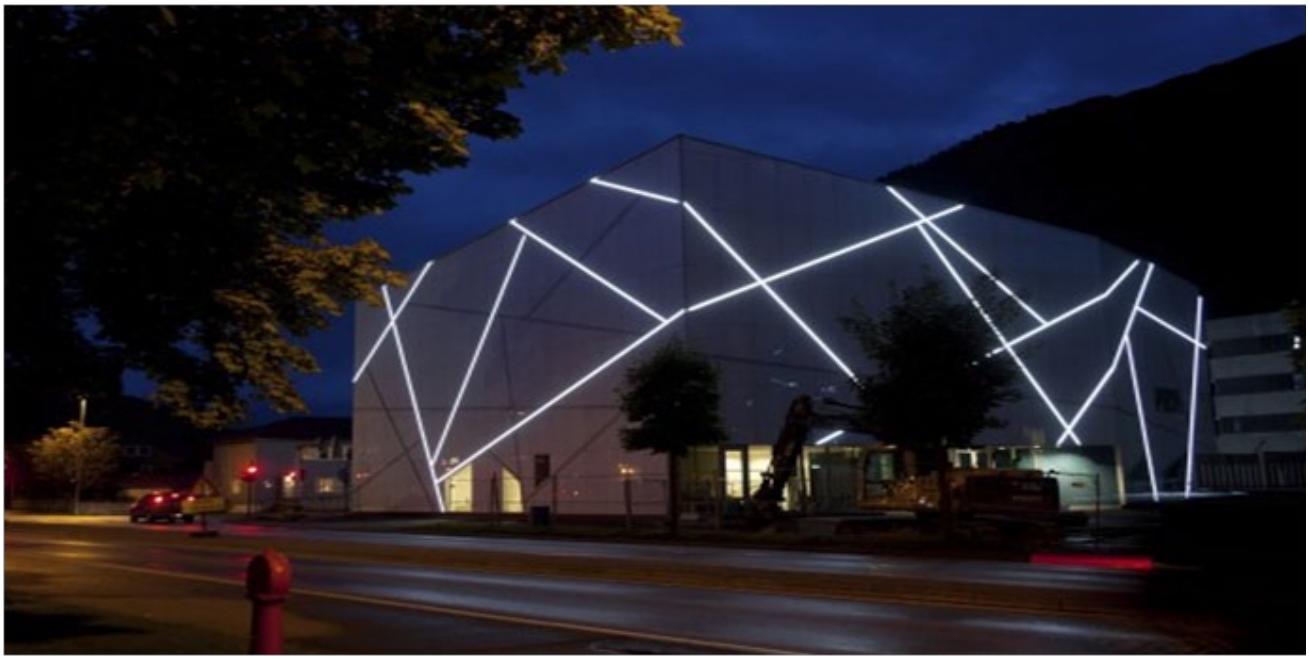


Display In corners in this modern structure.



display in exhibition

Sogn & Fjordane Art Museum, Førde, Norway (2011-2012)



Credit: C.F. Møller Architects

site

C.F. Møller Architects were also responsible for the design of the SEIF office building which is the museum's closest neighbour, and for a residential complex on the same site which is presently under construction.

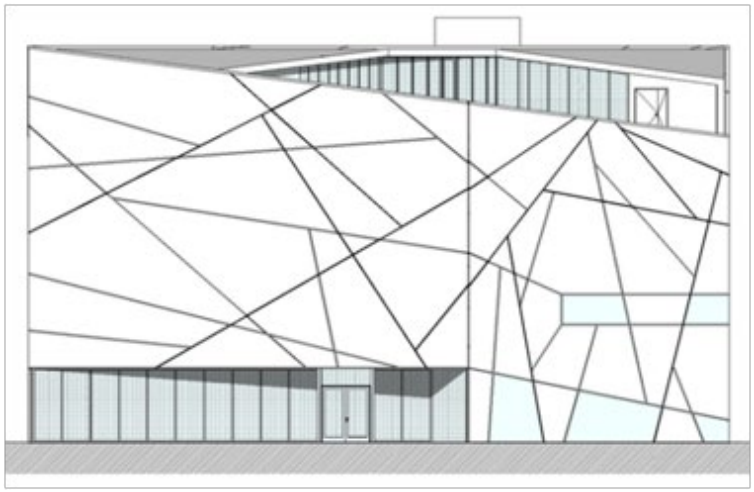
Concept

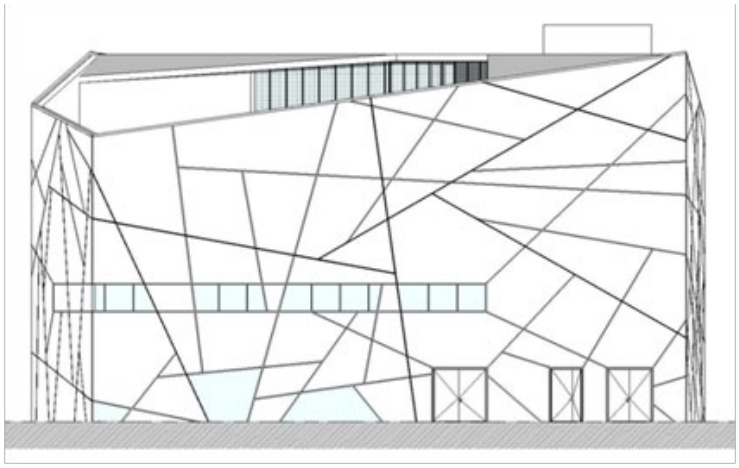
he small Norwegian town of Førde draws its qualities from its interaction with the surrounding mountains, which are visible everywhere, and from Jostedalsbreen, the largest glacier on the European mainland, which lies in close proximity to the town.

The town's new museum, Sogn&FjordaneKunstmuseum also draws upon the distinctive landscape for its architectural expression: the museum lies like a crystal-clear block of ice that has slid down from the surrounding mountains

Lighting/Natural lighting

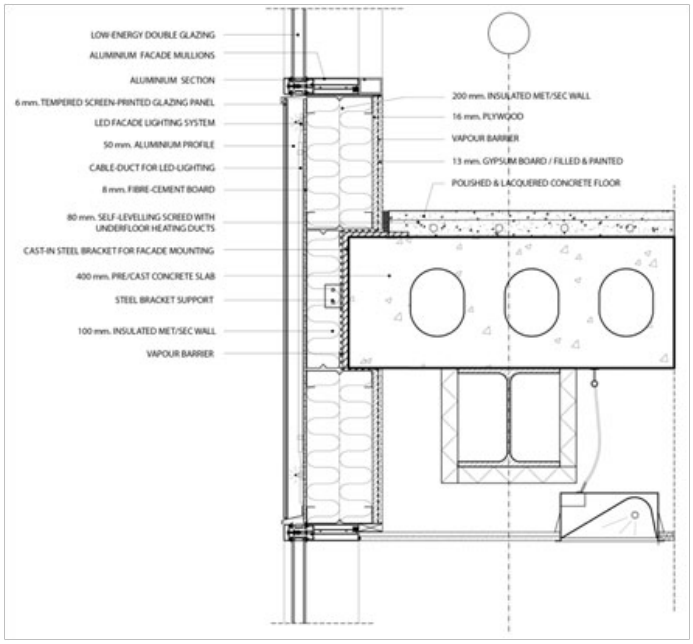
Lighting side of natural sunlight coming from the windows





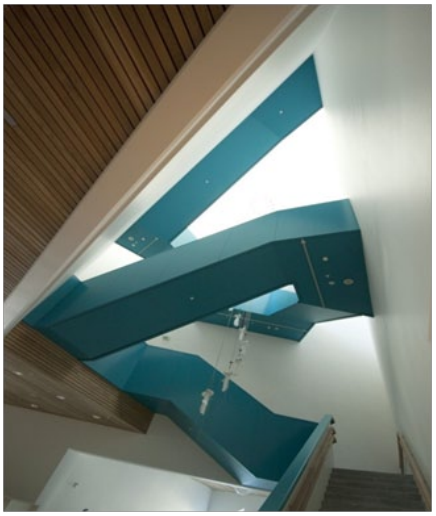
outdoor artificial lighting

artificial lighting is used to preserve the paintings with a good quantity of lighting is calculated to suite the exhibitions visitors.



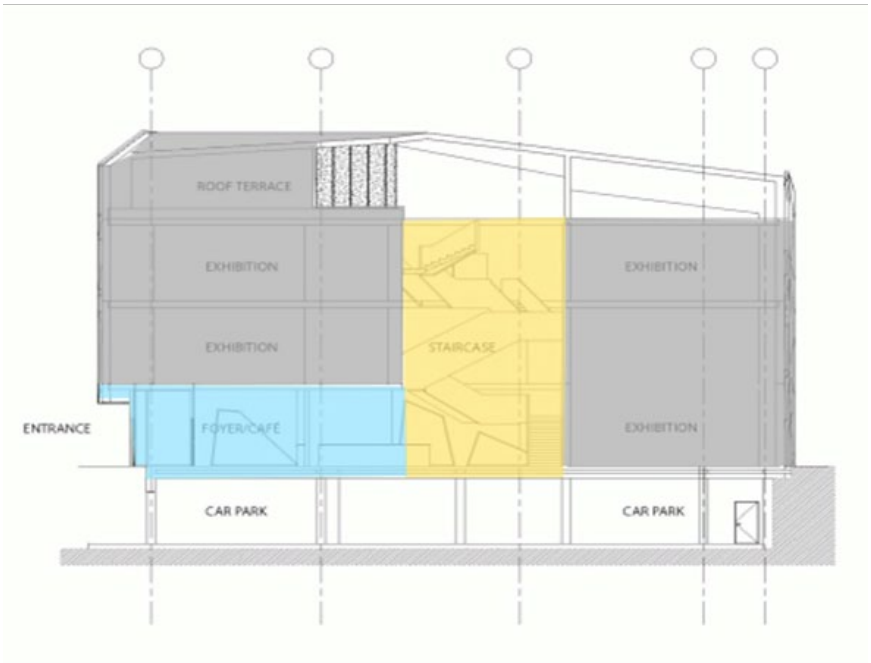
COLOR

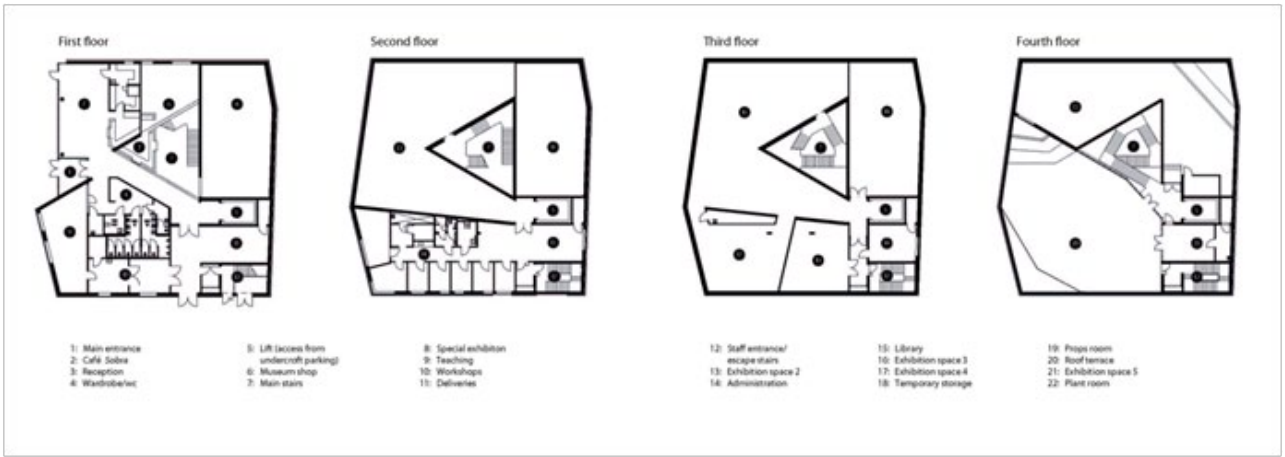
The vertical &horizontal element circulation are with contrast color.

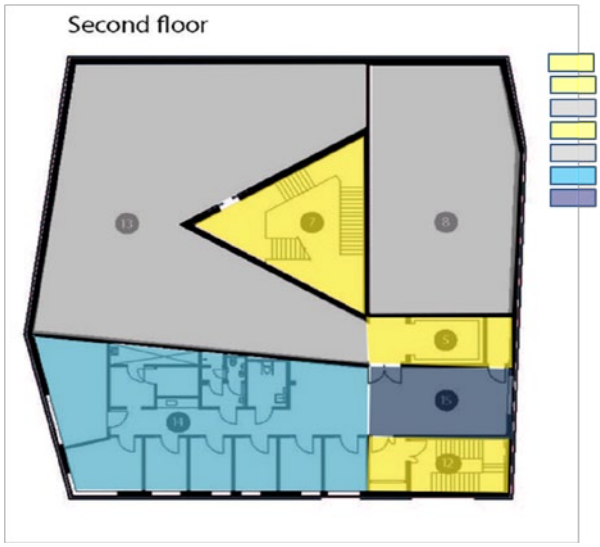


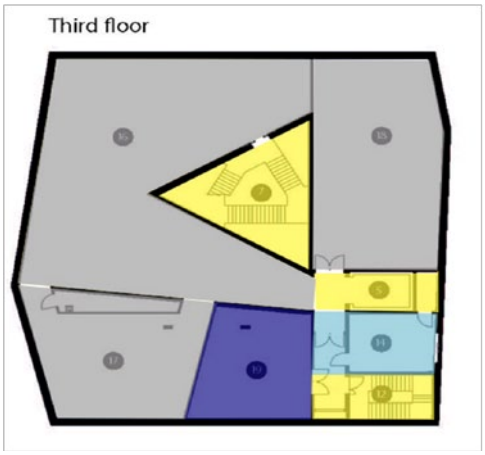
Level spaces, circulation

The crystalline form provides an asymmetrical plan solution, with varying displacements in the facade.
Inside, visitors move upwards through the museum's four floors of exhibition space, and at the top a panoramic view of the mountains can be enjoyed from a roof terrace that can also function as an exhibition space or stage.









walls
Interior walls

Exterior walls

From reflection glasses, The facade is clad in white glass with a network of angled lines, reminiscent of the fracture lines in ice. This network also defines the irregular window apertures. In the evening these lines are illuminated, so that the museum lies like a sparkling block in the middle of the town's darkness.

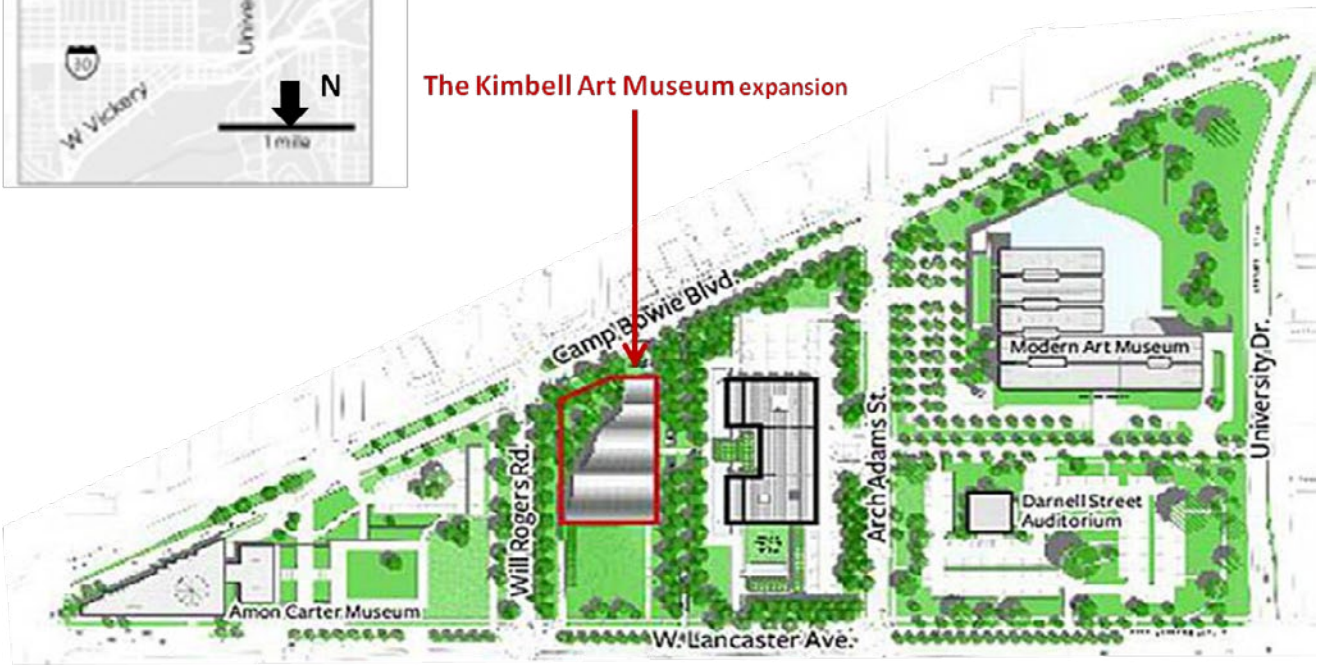
Kimbell Art Museum Expansion, Texas, USA (2007-scheduled 2013)

The Kimbell Art Museum unveiled plans Tuesday for the museum's expansion project, designed by Renzo Piano. The Kimbell is expanding its space because, well, it needs more of it. The museum currently does not have enough space to display both a major exhibition and their complete permanent collection. The museum also lacks space for educational purposes (and when I say "lacks space" I mean they have no space at all). The new building will almost double the museum's square footage, which will allow more gallery space and provide educational facilities.

The Location

The team considered many possibilities as far as where to put the new building. They have decided to put it on the green opposite the front of the Kimbell (not to be confused with the back of the Kimbell, which is where one usually enters the building after parking). While they considered placing the new facility on the East side of the building (where the above ground parking is at on Darnell Street), working around Arch Adams Street while keeping the buildings connected in some way presented difficulties. Also as Piano says, it's better to have the buildings "talking in a better way." Piano has a vision of bringing the public back to the front of Louis I. Kahn's masterpiece with an underground garage that will ascend to the front of the Kimbell, in between the two buildings. The buildings will be connected by an underground "umbilical cord" (as Piano called it), however that will mostly be for employees and artwork. The public will go back and forth above ground, amongst the trees and the green that they will preserve throughout the process.

The team considered many possibilities as far as where to put the new building. They have decided to put it on the green opposite the front of the Kimbell (not to be confused with the back of the Kimbell, which is where one usually enters the building after parking).

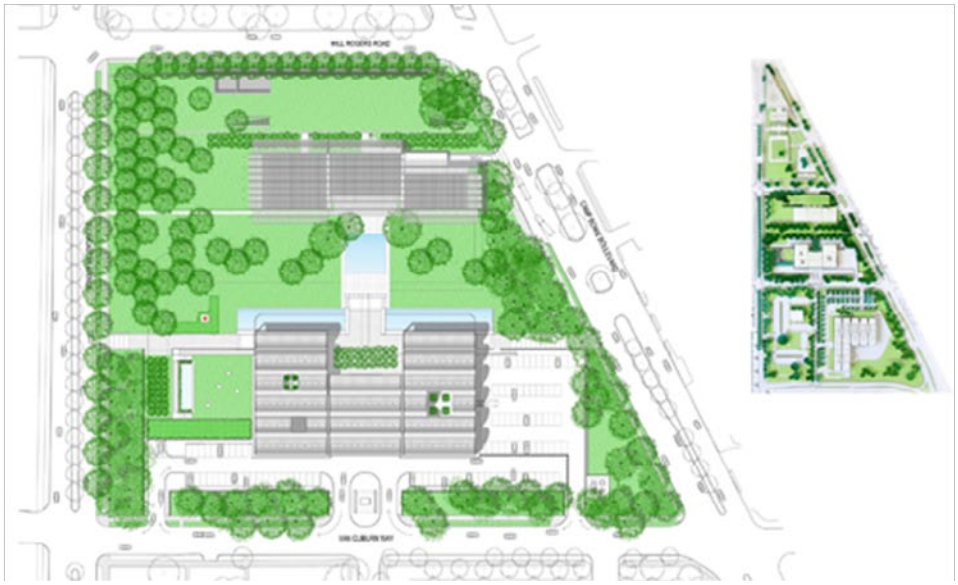


The Design

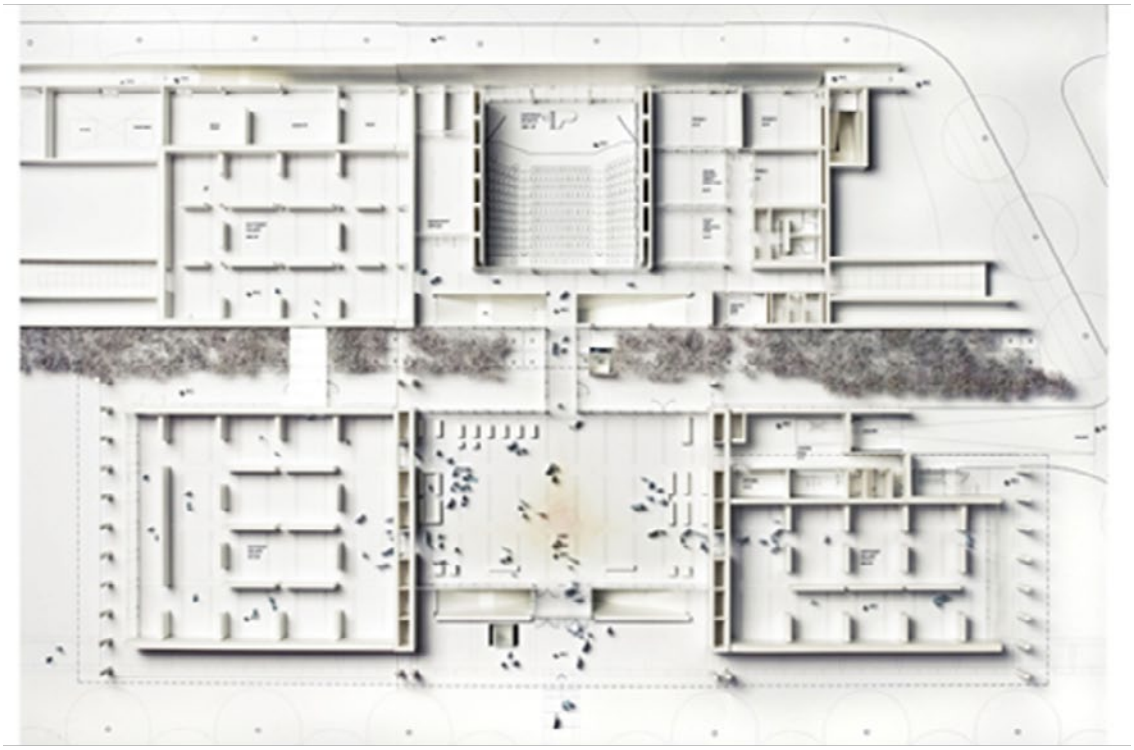
The building will be approximately 90,000 sq. ft., although with much of the building underground the facility will only take up about 50,000 sq. ft. of the green. One of Piano's concerns with the construction of the new building is its sustainability. Not only will part of the building be incorporated into the side of the earth (think earth home), but they are considering implementing the use of solar panels in their efforts to reduce energy use. The goal: to be “energy neutral.” (Don't worry, Piano assured us that the new building will not lack air conditioning like his last project, the California Academy of Sciences rebuilding in San Francisco.) Another concern is to preserve the integrity of Kahn's original building. To achieve this, Piano plans on subtly mirroring the proportions of the original building and using similar (yet “greener”) materials.

“This museum is living proof of humbleness,” Piano said of Kahn's work. “It's unpretentious, it's about scale.” Piano went on to say, “This is a masterpiece. The proportion of this building is perfect, you should not try to add, you should not try to change."

The building will house gallery space, classrooms and labs, a library, an auditorium and an underground parking garage.

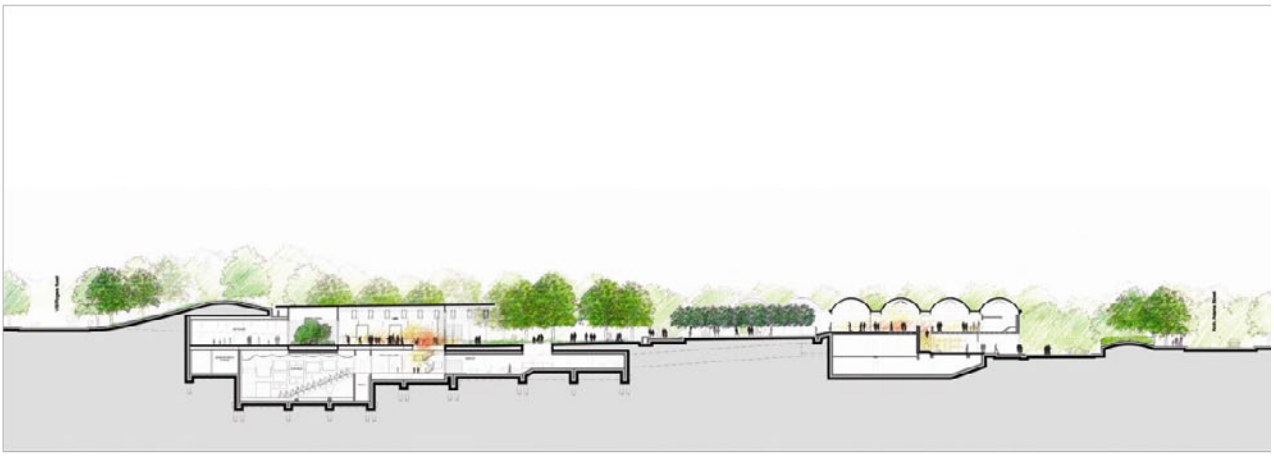


site-plan

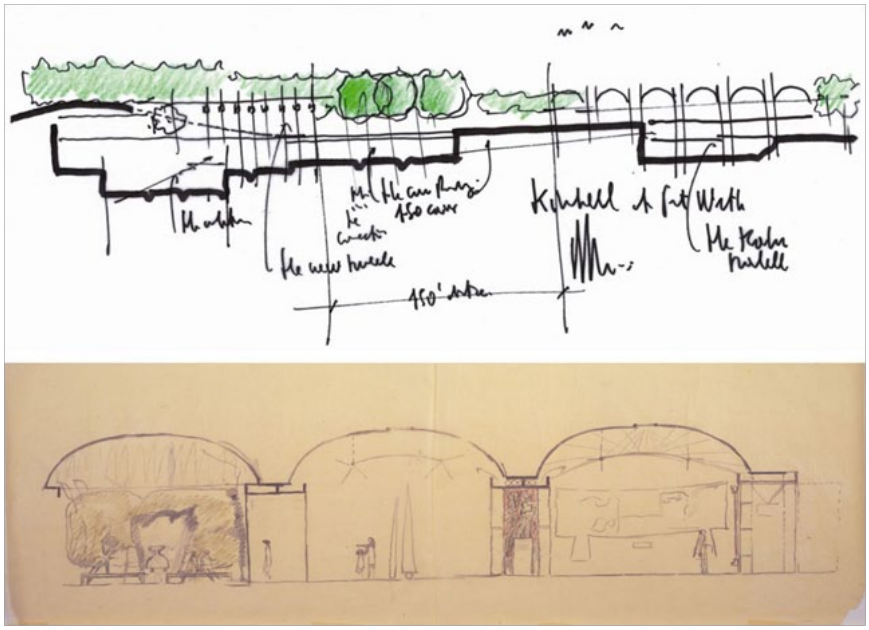


Ground floor plan

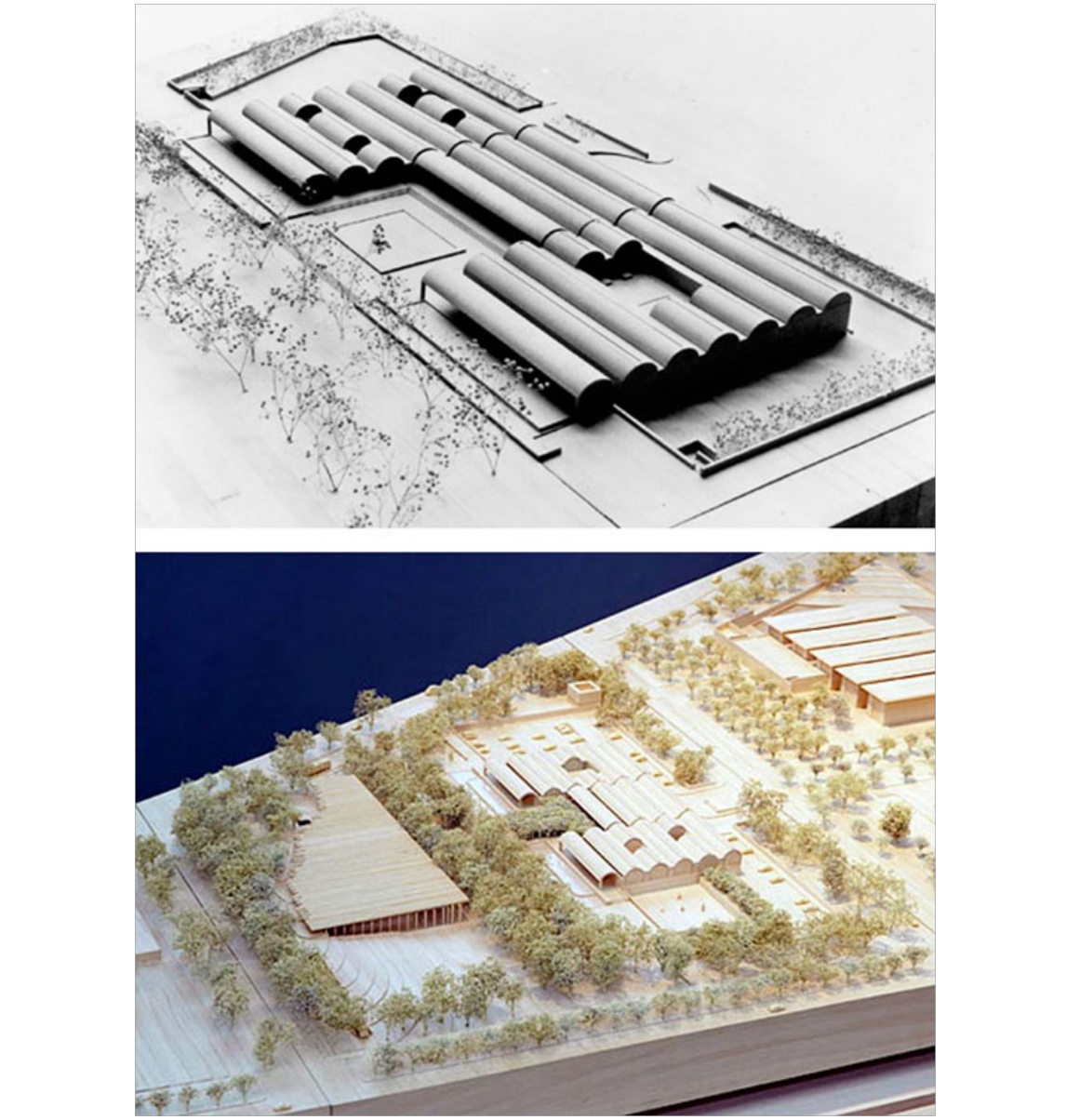
last figure and below are renderings of Renzo Piano's fortcoming expansion of the Kimbell Art Museum in the Cultural District. Piano's new building will sit across from the Kimbell's main entrance, on a portion of the current "Great Lawn." It will be of similar size and scale to the original Louis Kahn building, and defers to its predecessor in many ways – for example, Piano is attempting to correct the way people enter the complex, by orienting an entrance from a new underground garage to direct people into the space between the two buildings, facing the original Kimbell's main entrance (most people seem to throw their car in one of the eastern lots and scurry in via the below-grade back door rather than making their entrance through Kahn's beautiful main entrance on the west side).



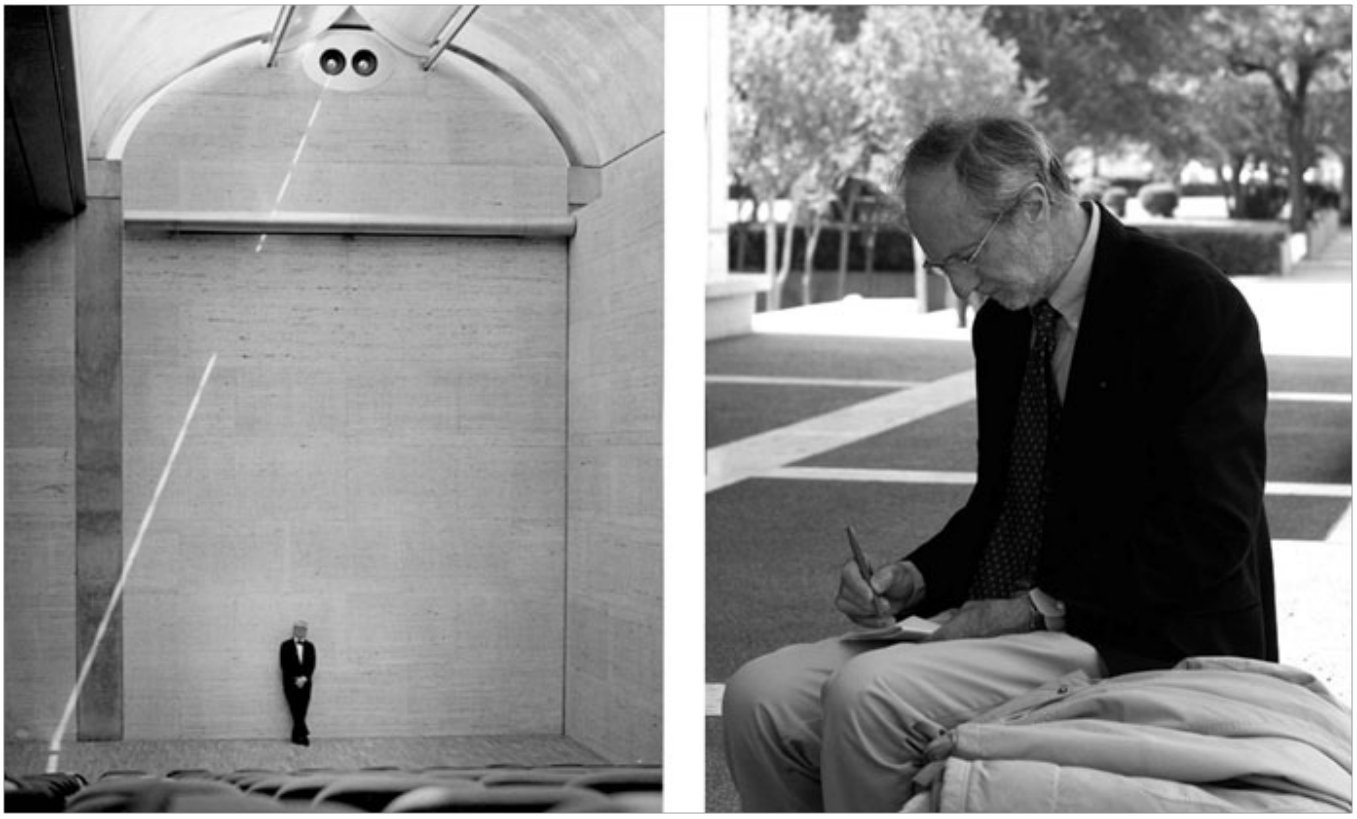
Section



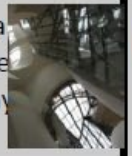
[R] top: Renzo Piano, Building section including the Kahn building, 2008 © Renzo Piano Building Workshop | bottom: Louis I. Kahn's schematic section of galleries and courtyard of the Kimbell Art Museum, photograph © Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission, Philadelphia



Renzo Piano, Gallery sketch, 2008 | image © Renzo Piano Building Workshop



Louis I. Kahn standing against the north wall of the Kimbell Art Museum auditorium before turning it over to its owner, the Kimbell Art Foundation, August 3, 1972

Architect				
Museum	Frank Lloyd Wright Architect **Solomon R. Guggenheim**	Frank Gehry Architect **Guggenheim Museum Bilbao**	Daniel Libeskind Architect **Royal Ontario Museum**	Zaha Hadid Architect **MAXXI Museum**
site	Aerial view of Solomon R. Guggenheim Museum with Central Park 	A cultural element in the center of industrial town 	Situated at one of the most prominen intersections in downtown Toronto 	fluidity matched with the identity of a "static" city as Rome 
Lighting	Depended on the natural lighting 	-Use natural with artifita lighting by irregular syste -the glass let only UV ray pass through 	Use natural with artifita lighting by irregular syst 	Use natural with artifital lighting in homogenous 
COLOR	Used neutral colors so as not to overwhelm the exhibits 	Used worm color to show display space 	Using contrast color with light to show horizon and vertical circulatio elements 	Using contrast color with light horizontal and vertical circulati elements 
spaces	Continuity space with a huge atrium 	Continuity spaces with a huge atrium 	Continuity and connec with the original muse 	Universal spaces 
walls	The curved walls of the interior were intended 	A curved titanium walls with small thickness to give shiny and more resistration 	25% glass & 75% aluminum steel with stripes to get wavy shape 	Curved walls with pure concrete 
note	- a problem which Museum Director James Johnson Sweeney took seriously, stating, "This is the most spectacular museum interior architecturally in this country"		-he focused on the museum design and did not on the display	-she focused on the museum design and did not on the display -get riba Stirling prize -the judges decided that the MAXXI Museum (Museum of 21 St Century Arts)

Conclusion

Museums in the twentieth century
There were many factors influenced the development of galleries and museums in the twentieth century:

-Museums and galleries affected the emergence and development of the intellectual and artistic movements and modern architecture.

-Economic and social crisis that emerged after the First World War.

-Modern industrial outlook is what was done by School Simplicity and direction of abstract geometric shapes as a reflection of the heavy ornaments in the nineteenth century.

-Vacuum resulting from the study materials and new construction methods.

-Scientific trends resulting from the great scientific progress and the most important invention of the computer.

-This is just a show and sequence for the onset and development of museums throughout the ages different.

References

Books

- Fletcher, Banister. A History of Architecture
- Newhouse, Victoria. Towards a New Museum
- Alden's Oxford Guide. Oxford: Alden & Company
- Physick, John (1982). The Victoria and Albert Museum: The History of its Building.
- Bridget Cherry & Nikolaus Pevsner, The Buildings of England London 3: The North West, 1991
- Harold Sellers Colton - the popular science monthly. september, 1909, Peale's Museum P.221
- Mary Ellen Hayward, Frank R. Shivers, Jr. The Architecture of Baltimore: An Illustrated History

Websites

Museums official websites

http://www.louvre.fr/en
http://www.dulwichpicturegallery.org.uk/
http://www.britishmuseum.org/
http://www.nationalgallery.org.uk/
http://www.fitzmuseum.cam.ac.uk/
http://www.thorvaldsensmuseum.dk/
http://www.ashmolean.org/
http://www.thewadsworth.org/
http://www.nationalgalleries.org/
http://www.vam.ac.uk/
http://www.oum.ox.ac.uk/
http://www.egyptianmuseum.gov.eg/
http://www.gem.gov.eg/
http://www.islamicmuseum.gov.eg/
http://www.guggenheim.org/
http://www.guggenheim.org/bilbao
http://www.fondazionemaxxi.it/?lang=en

Archives

http://archive.org/
http://www.corbisimages.com/
http://life.time.com/
http://digitalgallery.nypl.org/nypldigital/index.cfm
http://www.loc.gov/pictures/
http://www.ribapix.com/
http://modernegypt.bibalex.org

Other Websites

http://www.npr.org/templates/story/story.php?storyId=97377145
http://www.archdaily.com/272345/sogn-fjordane-art-museum-c-f-moller-architects/
http://www.archidose.org/Jan09/19/dose.html
http://www.archidose.org/main.html
http://www.cfmoller.com/p/Sogn-Fjordane-Art-Museum-i2642.html
http://www.youtube.com/watch?v=xwbejFWGZr0
http://www.youtube.com/watch?v=n5GWbOzKgpQ
http://www.slideshare.net/loveart2/20th-century-architecture